

# **DEPARTMENTAL PROGRAMS (5 YEAR CAPITAL PLAN)**

**CAPITAL AGENDA SUMMARY BY AGENCY  
(IN THOUSANDS OF DOLLARS)**

| AGENCIES                     | Authorized<br>Unissued | (Budget)<br>2000-01 | ***** 5 Year Capital Plan ***** |           |           |           |           | Unprogrammed | Recommended<br>5 Year Program |
|------------------------------|------------------------|---------------------|---------------------------------|-----------|-----------|-----------|-----------|--------------|-------------------------------|
|                              |                        |                     | 2001-02                         | 2002-03   | 2003-04   | 2004-05   | 2005-06   |              |                               |
| AIRPORT                      | \$5,000                | \$4,215             | \$5,850                         | \$14,840  | \$6,530   | \$10,020  | \$20      | \$4,600      | \$37,260                      |
| ARTS                         | 25,000                 | 7,207               | 11,737                          | 17,292    | 22,959    | 20,209    | 10,667    | 0            | 82,864                        |
| CIVIC CENTER                 | 3,000                  | 0                   | 2,700                           | 2,470     | 2,535     | 2,235     | 2,565     | 22,465       | 12,505                        |
| PLANNING & DEVELOPMENT       | 43,045                 | 13,020              | 20,873                          | 20,911    | 15,330    | 14,163    | 14,346    | 55,040       | 85,623                        |
| PUBLIC WORKS                 | 5,000                  | 2,000               | 3,740                           | 5,090     | 4,840     | 4,590     | 4,840     | 43,500       | 23,100                        |
| FIRE                         | 11,250                 | 2,450               | 5,200                           | 8,550     | 4,600     | 3,950     | 3,950     | 23,600       | 26,250                        |
| HEALTH                       | 6,000                  | 1,000               | 1,000                           | 1,000     | 1,000     | 1,000     | 1,000     | 1,000        | 5,000                         |
| HISTORICAL                   | 6,000                  | 1,450               | 1,000                           | 2,550     | 2,600     | 27,500    | 22,500    | 25,400       | 56,150                        |
| HOUSING                      | 0                      | 1,538               | 26,540                          | 8,666     | 13,291    | 8,789     | 2,172     | 0            | 59,458                        |
| LIBRARY                      | 1,750                  | 3,700               | 8,805                           | 4,150     | 3,350     | 1,875     | 1,875     | 13,585       | 20,055                        |
| MUNICIPAL PARKING            | 0                      | 3,000               | 3,000                           | 3,000     | 3,000     | 3,000     | 3,000     | 20,000       | 15,000                        |
| POLICE                       | 8,000                  | 2,000               | 11,000                          | 4,500     | 2,000     | 2,000     | 2,000     | 56,842       | 21,500                        |
| PUBLIC LIGHTING              | 39,045                 | 70,955              | 9,875                           | 8,825     | 8,800     | 8,700     | 8,700     | 150,720      | 44,900                        |
| RECREATION                   | 43,550                 | 8,000               | 10,500                          | 10,500    | 11,800    | 10,950    | 11,550    | 293,675      | 55,300                        |
| STREET CAPITAL               | 0                      | 140,739             | 132,343                         | 47,000    | 47,000    | 47,000    | 47,000    | 0            | 320,343                       |
| TRANSPORTATION               | 7,000                  | 48,992              | 46,390                          | 30,840    | 16,572    | 41,327    | 39,865    | 11,620       | 174,994                       |
| WATER                        | 0                      | 682,389             | 400,781                         | 106,084   | 89,413    | 206,812   | 3,999     | 0            | 807,089                       |
| SEWERAGE                     | 0                      | 1,370,161           | 390,917                         | 329,633   | 653,638   | 95,837    | 217,537   | 0            | 1,687,562                     |
| ZOOLOGICAL INSTITUTE         | 10,000                 | 12,600              | 11,800                          | 3,500     | 2,500     | 1,950     | 2,000     | 9,050        | 21,750                        |
| AFRICAN-AMERICAN MUSEUM      | 4,000                  | 750                 | 1,500                           | 1,000     | 1,000     | 1,000     | 0         | 10,000       | 4,500                         |
| APPROPRIATED/UNSOLD PROJECTS | 11,770                 | 0                   | 0                               | 0         | 0         | 0         | 0         | 0            | 0                             |
| TOTALS                       | \$229,410              | \$2,376,166         | \$1,105,551                     | \$630,401 | \$912,758 | \$512,907 | \$399,586 | \$741,097    | \$3,561,203                   |

**CAPITAL AGENDA SUMMARY BY FUNDING SOURCE  
(IN THOUSANDS OF DOLLARS)**

| SOURCES OF FUNDS:             | Authorized<br>Unissued | 2000-01<br>Budget | ***** 5 Year Capital Plan ***** |           |           |           |           | Unprogrammed | Recommended<br>5 Yr Program<br>Totals |  |
|-------------------------------|------------------------|-------------------|---------------------------------|-----------|-----------|-----------|-----------|--------------|---------------------------------------|--|
|                               |                        |                   | 2001-02                         | 2002-03   | 2003-04   | 2004-05   | 2005-06   |              |                                       |  |
| GENERAL OBLIGATION BONDS      |                        |                   |                                 |           |           |           |           |              |                                       |  |
| AIRPORT                       | \$5,000                | \$2,215           | \$1,300                         | \$1,020   | \$1,025   | \$1,020   | \$20      | \$4,600      | \$4,385                               |  |
| ARTS                          | 25,000                 | 5,345             | 5,000                           | 5,000     | 5,000     | 5,000     | 5,000     | 0            | 25,000                                |  |
| CIVIC CENTER                  | 3,000                  | 0                 | 1,000                           | 1,070     | 1,135     | 835       | 1,165     | 19,570       | 5,205                                 |  |
| PLANNING & DEVELOPMENT        | 43,045                 | 6,500             | 10,000                          | 10,700    | 10,045    | 10,500    | 11,500    | 54,040       | 52,745                                |  |
| PUBLIC WORKS                  | 5,000                  | 2,000             | 1,000                           | 2,000     | 2,000     | 1,000     | 1,000     | 16,300       | 7,000                                 |  |
| FIRE                          | 11,250                 | 2,000             | 3,200                           | 3,200     | 3,150     | 3,150     | 3,150     | 20,250       | 15,850                                |  |
| HEALTH                        | 6,000                  | 1,000             | 1,000                           | 1,000     | 1,000     | 1,000     | 1,000     | 1,000        | 5,000                                 |  |
| HISTORICAL                    | 6,000                  | 400               | 1,000                           | 500       | 500       | 500       | 500       | 25,400       | 3,000                                 |  |
| POLICE                        | 8,000                  | 2,000             | 2,000                           | 2,000     | 2,000     | 2,000     | 2,000     | 56,842       | 10,000                                |  |
| PUBLIC LIGHTING               | 39,045                 | 7,155             | 9,875                           | 8,825     | 8,800     | 8,700     | 8,700     | 150,720      | 44,900                                |  |
| RECREATION                    | 43,550                 | 8,000             | 10,000                          | 10,000    | 11,300    | 10,450    | 11,050    | 293,175      | 52,800                                |  |
| TRANSPORTATION                | 7,000                  | 1,000             | 1,000                           | 1,000     | 1,000     | 1,000     | 1,000     | 11,620       | 5,000                                 |  |
| ZOOLOGICAL INSTITUTE          | 10,000                 | 2,500             | 1,400                           | 1,500     | 2,000     | 1,950     | 2,000     | 9,050        | 8,850                                 |  |
| LIBRARY                       | 1,750                  | 1,750             | 1,000                           | 750       | 0         | 1,800     | 1,800     | 13,585       | 5,350                                 |  |
| AFRICAN-AMERICAN MUSEUM       | 4,000                  | 750               | 1,000                           | 1,000     | 1,000     | 1,000     | 0         | 10,000       | 4,000                                 |  |
| Appropriated//Unsold Projects | 11,770                 | 0                 | 0                               | 0         | 0         | 0         | 0         | 0            | 0                                     |  |
| Total                         | \$229,410              | \$42,615 *        | \$49,775                        | \$49,565  | \$49,955  | \$49,905  | \$49,885  | \$686,152    | \$249,085                             |  |
| CASH CAPITAL                  |                        |                   |                                 |           |           |           |           |              |                                       |  |
| FIRE                          |                        | \$450             | \$0                             | \$2,850   | \$1,450   | \$800     | \$800     | \$3,350      | \$5,900                               |  |
| HISTORICAL                    |                        | 50                | 0                               | 0         | 0         | 0         | 0         | 0            | 0                                     |  |
| TRANSPORTATION                |                        | 0                 | 0                               | 0         | 0         | 0         | 0         | 0            | 0                                     |  |
| LIBRARY                       |                        | 1,950             | 5,305                           | 3,400     | 3,350     | 75        | 75        | 0            | 12,205                                |  |
| Total                         |                        | \$2,450           | \$5,305                         | \$6,250   | \$4,800   | \$875     | \$875     | \$3,350      | \$18,105                              |  |
| PRIVATE FUNDS                 |                        |                   |                                 |           |           |           |           |              |                                       |  |
| ARTS                          |                        | \$1,862           | \$6,737                         | \$12,292  | \$17,959  | \$15,209  | \$5,667   | \$0          | \$57,864                              |  |
| HISTORICAL                    |                        | 0                 | 0                               | 50        | 100       | 7,500     | 7,500     | 0            | 15,150                                |  |
| ZOOLOGICAL INSTITUTE          |                        | 7,000             | 5,000                           | 500       | 500       | 0         | 0         | 0            | 6,000                                 |  |
| Total                         |                        | \$8,862           | \$11,737                        | \$12,842  | \$18,559  | \$22,709  | \$13,167  | \$0          | \$79,014                              |  |
| BLOCK GRANT                   |                        |                   |                                 |           |           |           |           |              |                                       |  |
| PLANNING & DEVELOPMENT        |                        | \$3,620           | \$4,913                         | \$9,711   | \$4,785   | \$3,163   | \$2,846   | \$0          | \$25,418                              |  |
| Total                         |                        | \$3,620           | \$4,913                         | \$9,711   | \$4,785   | \$3,163   | \$2,846   | \$0          | \$25,418                              |  |
| REVENUE SUPPORTED             |                        |                   |                                 |           |           |           |           |              |                                       |  |
| MUNICIPAL PARKING             |                        | \$3,000           | \$3,000                         | \$3,000   | \$3,000   | \$3,000   | \$3,000   | \$20,000     | \$15,000                              |  |
| WATER                         |                        | 682,389           | 400,781                         | 106,084   | 89,413    | 206,812   | 3,999     | 0            | 807,089                               |  |
| SEWERAGE                      |                        | 1,370,161         | 390,917                         | 329,633   | 653,638   | 95,837    | 217,537   | 0            | 1,687,562                             |  |
| Total                         |                        | \$2,055,550       | \$794,698                       | \$438,717 | \$746,051 | \$305,649 | \$224,536 | \$20,000     | \$2,509,651                           |  |

**CAPITAL AGENDA SUMMARY BY FUNDING SOURCE  
(IN THOUSANDS OF DOLLARS)**

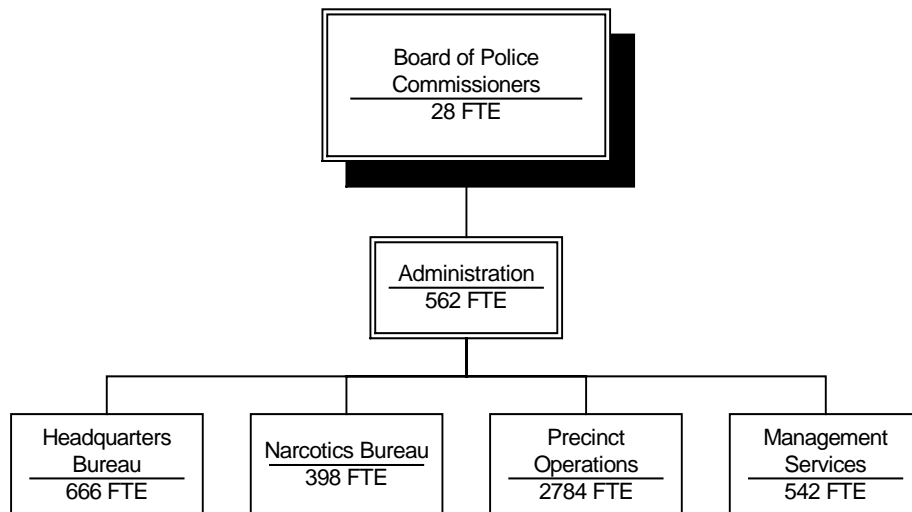
| SOURCES OF FUNDS:        | Authorized<br>Unissued | 2000-01<br>Budget | ***** 5 Year Capital Plan ***** |           |           |           |           | Unprogrammed | Recommended<br>5 Yr Program<br>Totals |  |
|--------------------------|------------------------|-------------------|---------------------------------|-----------|-----------|-----------|-----------|--------------|---------------------------------------|--|
|                          |                        |                   | 2001-02                         | 2002-03   | 2003-04   | 2004-05   | 2005-06   |              |                                       |  |
| STREET & HIGHWAY GRANTS  |                        |                   |                                 |           |           |           |           |              |                                       |  |
| STREET CAPITAL           |                        | \$46,820          | \$37,086                        | \$33,000  | \$33,000  | \$33,000  | \$33,000  | \$0          | \$169,086                             |  |
| PUBLIC WORKS             |                        | 0                 | 2,740                           | 3,090     | 2,840     | 3,590     | 3,840     | 27,200       | 16,100                                |  |
| Total                    |                        | \$46,820          | \$39,826                        | \$36,090  | \$35,840  | \$36,590  | \$36,840  | \$27,200     | \$185,186                             |  |
| TRANSPORTATION GRANTS    |                        |                   |                                 |           |           |           |           |              |                                       |  |
| TRANSPORTATION           |                        | \$47,992          | \$45,390                        | \$29,840  | \$15,572  | \$40,327  | \$38,865  | \$0          | \$169,994                             |  |
| HOUSING GRANTS           |                        |                   |                                 |           |           |           |           |              |                                       |  |
| HOUSING                  |                        | \$1,538           | \$26,540                        | \$8,666   | \$13,291  | \$8,789   | \$2,172   | \$0          | \$59,458                              |  |
| AVIATION GRANTS          |                        |                   |                                 |           |           |           |           |              |                                       |  |
| AIRPORT                  |                        | \$2,000           | \$4,300                         | \$10,445  | \$5,505   | \$9,000   | \$0       | \$0          | \$29,250                              |  |
| OTHER IDENTIFIED SOURCES |                        |                   |                                 |           |           |           |           |              |                                       |  |
| AIRPORT                  |                        | \$0               | \$250                           | \$3,375   | \$0       | \$0       | \$0       | \$0          | \$3,625                               |  |
| CIVIC CENTER             |                        | 0                 | 1,700                           | 1,400     | 1,400     | 1,400     | 1,400     | 2,895        | 7,300                                 |  |
| HISTORICAL               |                        | 1,000             | 0                               | 2,000     | 2,000     | 19,500    | 14,500    | 0            | 38,000                                |  |
| LIBRARY                  |                        | 0                 | 2,500                           | 0         | 0         | 0         | 0         | 0            | 2,500                                 |  |
| PUBLIC LIGHTING          |                        | 63,800            | 0                               | 0         | 0         | 0         | 0         | 0            | 0                                     |  |
| POLICE                   |                        | 0                 | 7,000                           | 0         | 0         | 0         | 0         | 0            | 7,000                                 |  |
| PLANNING & DEVELOPMENT   |                        | 2,900             | 460                             | 0         | 0         | 0         | 0         | 1,000        | 460                                   |  |
| RECREATION               |                        | 0                 | 500                             | 500       | 500       | 500       | 500       | 500          | 2,500                                 |  |
| STREET CAPITAL           |                        | 93,919            | 95,257                          | 14,000    | 14,000    | 14,000    | 14,000    | 0            | 151,257                               |  |
| ZOOLOGICAL INSTITUTE     |                        | 3,100             | 5,400                           | 1,500     | 0         | 0         | 0         | 0            | 6,900                                 |  |
| AFRICAN-AMERICAN MUSEUM  |                        | 0                 | 500                             | 0         | 0         | 0         | 0         | 0            | 500                                   |  |
| Total                    |                        | \$164,719         | \$113,567                       | \$22,775  | \$17,900  | \$35,400  | \$30,400  | \$4,395      | \$220,042                             |  |
| UNIDENTIFIED SOURCES     |                        |                   |                                 |           |           |           |           |              |                                       |  |
| FIRE                     |                        | \$0               | \$2,000                         | \$2,500   | \$0       | \$0       | \$0       | \$0          | \$4,500                               |  |
| POLICE                   |                        |                   | 2,000                           | 2,500     | 0         | 0         | 0         | 0            | 4,500                                 |  |
| PLANNING & DEVELOPMENT   |                        | 0                 | 5,500                           | 500       | 500       | 500       | 0         | 0            | 7,000                                 |  |
| Total                    |                        | \$0               | \$9,500                         | \$5,500   | \$500     | \$500     | \$0       | 0            | 16,000                                |  |
| GRAND TOTAL              | \$229,410              | \$2,376,166       | \$1,105,551                     | \$630,401 | \$912,758 | \$512,907 | \$399,586 | \$741,097    | \$3,561,203                           |  |

NOTES: 'OTHER IDENTIFIED SOURCES' of funding are identified in the departmental narrative sections.

Authorized General Obligation amounts are programmed for specific projects within the department detail summaries; these projects may change as priorities change.

\* The FY2000-01 (General Obligation Bond) Budget includes \$40,000,000 of Bond Sale Proceeds for new projects and \$2,615,000 of Capital Reinvestment Funds.

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### **A GENCY MISSION**

To provide a safe environment through efficient, cost effective, professional community-based Police services to our residents, businesses and visitors. To preserve the public peace, prevent crime, arrest offenders, protect the rights of persons and property, guard the public safety, preserve order and enforce the laws of the State and the nation and the ordinances of the City of Detroit.

### **CURRENT FACILITIES**

The Detroit Police Department, headquartered at 1300 Beaubien, consists of thirteen (13) precincts strategically located throughout the city. The Department utilizes a total of twenty-three (23) owned buildings, thirteen rental facilities, and forty-five (45) areas rented throughout the City for operation of the mini-station function. Twelve (12) of the owned buildings are local precinct stations; one is a headquarters complex, and the remainder house specialty units that support the police mission.

### **FIVE YEAR HISTORY**

In the last five years the Police Department has emphasized updating their physical facilities. The most recently completed projects include a new command post and office facility for the Customer Service Center that will also serve as an auxiliary emergency 911 center. Renovations of the Second and Fifth Precincts have also recently been completed.

### **PROPOSED FIVE YEAR CAPITAL PLAN**

The Police Department's proposed five-year plan earmarks most of its capital resources to precinct replacement and precinct renovations. The other projects included in the department's capital plan are: Public Safety Mall,

Communications Center, Johnson Control Project, Mounted Unit Horse Barn, and a new Headquarters complex.

### **Public Safety Mall**

The Police Department, in conjunction with other agencies, is preparing to erect a state-of-the-art Public Safety Mall, to be located in Southwest Detroit. This facility will replace the current Fourth Precinct. The mall concept is designed to consolidate efforts of various agencies, to reduce costs and to provide "one-stop-shopping" for citizen services and to serve as a prototype facility for future areas of the City of Detroit.

Agencies that will be located in the mall are proposed as:

The Detroit Police Department-  
Fourth Precinct

The Detroit Fire Department

Detroit Municipal Parking

Detroit Corporation Counsel

36<sup>th</sup> District Court

3<sup>rd</sup> Circuit Family Division

Fire Prevention

Michigan State Police

Wayne County Neighborhood  
Services

Wayne County Neighborhood  
Services Mediation Office

Wayne County Prosecutor

Wayne County Sheriff

The mall will serve as a model for other similar facilities in the City of Detroit. It will maximize access to services and will result in more efficient delivery of services to the public. The estimated cost of the project is \$20-25 million (including land acquisition costs). The Detroit Building Authority will administer the project; the project consultant is the Hamilton Anderson Team. The funding requirements for the mall are included in both the Police and Fire Department's Capital Agenda. In

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addition, Empowerment Zone funds, in the amount of \$3.5 million will be used for the project.

The proposed time table for the Public Safety Mall Project is as follows:

Completion of Design Phase

December 2000

Construction begins

Spring 2001

Construction completed

Spring 2002

Preliminary drawings have been approved and final specifications have begun.

### Training Facility

The Police Department is proposing the construction of a new training facility, which would be a joint venture with the Fire Department. The current training facility is located in a leased space that is inadequate for the needs of the department. Also, it is located in an area that is being considered for redevelopment. The facility is used for cadet training, in service training for executives, and continuing programs for all police personnel. Due to a shortage of classroom space, cadet training is undertaken in shifts and personnel training is delayed because of scheduling difficulties. Also, there is a lack of proper space for physical training.

The new two-story facility will be designed specifically as a training center which will allow the department to maximize training effectiveness. The site for this facility has not been determined. In FY99-00 \$1,000,000 in investment earnings was budgeted for the new training complex. A similar amount was also budgeted in the Fire Department. The training complex will be a joint venture with the Fire Department.

### Communications Center

In FY 1999-2000 funds were designated for a new Communication System facility. The current Communications System Facility was constructed in 1940 and has approximately 8,000 square feet of usable space. Communication Systems is responsible for the design, procurement, installation, inspection and repair of all communication and electronic facilities of the Police Department and other City agencies. The current facility lacks sufficient space for repairs, installations, parts storage, and outdoor vehicle parking. Staff accommodations are minimal. A larger facility with at least 25,000 square feet will alleviate space constraints.

## **INTERDEPARTMENTAL RELATIONSHIPS**

The Police Department has contracted with the Detroit Building Authority to perform project administration on various capital projects. The Department is working in conjunction with the Fire Department on construction of the new Public Safety Mall to be located in Southwest Detroit. The two departments are working together in the development of a joint Training Complex.

### **GOALS FOR CAPITAL PROGRAM**

1. To continue to replace or renovate Department facilities which are hazardous and obsolete.
2. To renovate an existing structure to serve as a Communications Center.
3. To improve indoor air quality, lighting, and temperature control at Department facilities.

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4. To consolidate widely scattered rental properties into a more cost-effective owned or leased facility.

### **RATIONALE FOR CAPITAL PROGRAM**

The Police Capital Program is designed to update the physical police protection system to meet Federal and State occupational safety and health requirements. The program will promote operational efficiency by renovating or replacing obsolete facilities with facilities designed to meet current future department needs.



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### Public Safety Mall

The Public Safety Mall will replace the current 4<sup>th</sup> Precinct. Construction will be administered by the Detroit Building Authority. Funds, held by the DBA in the amount \$6.1 were budgeted in a previous year.

|         |             |                      |
|---------|-------------|----------------------|
| 2001-02 | \$2,000,000 | Unidentified Sources |
| 2002-03 | \$2,000,000 | Unidentified Sources |

### Precinct Renovations

Many of the Police Department facilities need extensive renovations, not only to comply with MIOSHA regulations and State Corrections Departments regulations, but also to maintain the structural integrity of the buildings. The first, third, fourth, fifth, seventh, eighth and tenth precincts were built over 33 years ago. Heating, air conditioning, plumbing, and electrical service are items that need to be upgraded. In many cases window, doors, roofs, and paved areas need to be replaced and ceilings and walls repaired.

|         |             |                          |
|---------|-------------|--------------------------|
| 2001-02 | \$2,000,000 | General Obligation Bonds |
| 2002-03 | \$2,000,000 | General Obligation Bonds |
| 2003-04 | \$2,000,000 | General Obligation Bonds |
| 2004-05 | \$2,000,000 | General Obligation Bonds |
| 2005-06 | \$2,000,000 | General Obligation Bonds |

### Communications Center

The Police Department has identified a facility that is ideally suited for developing a “state of art” Communications Center and for relocating several Department commands. The Communications Center will house the Technical Services Division, Communications Operations Sections, Communications Systems Unit, Technology Liaison Office, and the Fleet Control Unit. The Center will be located at 13131-13133 Lyndon. The lease payments for the Center will be funded with telephone surcharge revenue. A new CAD system and building renovations will be grant funded.

|         |             |   |
|---------|-------------|---|
| 2001-02 | \$7,000,000 | Other Identified Sources<br>(Bureau of Justice<br>Assistance V.Grant) |
|---------|-------------|---|

### Johnson Controls Project

Project to improve indoor air quality, lighting, and temperature control at Police Department facilities. The project involves the installation of new boilers, steam traps, lighting retrofits, automatic temperature controls and other measures that are designed to provide energy savings and increase employee safety and productivity.

|         |             |              |
|---------|-------------|--------------|
| 2000-02 | \$2,842,000 | Unprogrammed |
|---------|-------------|--------------|

### Mounted Unit Horse Barn

A Mounted Section Horse Barn facility is needed to house the horses, a blacksmith shop, horse corral, manure bin, office area, parking for department vehicles and privately-owned automobiles of officers and civilian personnel. The current facility at 100 E. Bethune is an aged building nearly 100 years old. As such, the structure no longer meets

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the objectives of the Mounted Section and is in constant need of repair and special maintenance. The replacement facility will be a two-story structure of approximately 23,000 square feet and will allow the unit to be self-contained as well as providing handicap access to all parts of the building.

\$4,000,000

Unprogrammed

### **Headquarters Complex**

The present Headquarters Building, constructed in 1923, provides outdated and inadequate facilities for a law enforcement agency that is rapidly expanding in function and sophistication. Designed at a time when the City's police force numbered under 2,000, the present Headquarters Building fails in serving the needs of a force numbering more than 4,000 officers. Lack of space and facilities has necessitated the displacement of many integral police functions to various locations throughout the City. The increased cost in terms of dollars and time resulting from this displacement would be eliminated by the construction of a modern police facility. This facility should be located in close proximity to existing court and jail facilities.

\$50,000,000

Unprogrammed

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(000's OMITTED)

| Projects                   | *<br>Project<br>Status | **<br>Project<br>Timeline | ***<br>Impact<br>on Budget |  | Funding<br>Source | Authorized<br>Unissued | (Budget)<br>2000-01 | ***** 5 Year Capital Plan ***** |         |         |         |         | Unprogrammed |
|----------------------------|------------------------|---------------------------|----------------------------|--|-------------------|------------------------|---------------------|---------------------------------|---------|---------|---------|---------|--------------|
|                            |                        |                           |                            |  |                   |                        |                     | 2001-02                         | 2002-03 | 2003-04 | 2004-05 | 2005-06 |              |
| Public Safety Mall         | N                      | P                         | NOI/NSI                    |  | G.O.<br>U.S.      | \$2,000                |                     | \$2,000                         | \$2,500 |         |         |         |              |
| Precinct Renovations       | M                      | O                         | NOI/NSI                    |  | G.O.              | 4,000                  | \$2,000             | 2,000                           | 2,000   | \$2,000 | \$2,000 | \$2,000 |              |
| Communication Center       | N                      | P                         | AF/NSI                     |  | O.S.              |                        |                     | 7,000                           |         |         |         |         |              |
| Johnson Controls Project   | N                      | P                         | AF/NSI                     |  | G.O.              | 2,000                  |                     |                                 |         |         |         |         | 2,842        |
| Mounted Section Horse Barn | N                      | P                         | NOI/NSI                    |  | G.O.              |                        |                     |                                 |         |         |         |         | \$4,000      |
| Headquarters Complex       | N                      | P                         | AF/NSI                     |  | G.O.              |                        |                     |                                 |         |         |         |         | 50,000       |
| TOTALS                     |                        |                           |                            |  |                   | \$8,000                | \$2,000             | \$11,000                        | \$4,500 | \$2,000 | \$2,000 | \$2,000 | \$56,842     |

## Funding Source Summary:

|                           |      |         |         |         |         |         |         |         |         |          |
|---------------------------|------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| General Obligation Bonds  | G.O. | \$8,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$2,000 | \$56,842 |
| Other Identified Source * | O.S. |         | \$0     | \$7,000 | \$0     | \$0     | \$0     | \$0     | \$0     | \$0      |
| Unidentified Source       | U.S. |         |         | \$2,000 | \$2,500 | \$0     | \$0     | \$0     | \$0     | \$0      |

\* Other Identified Source: BJA V Grant

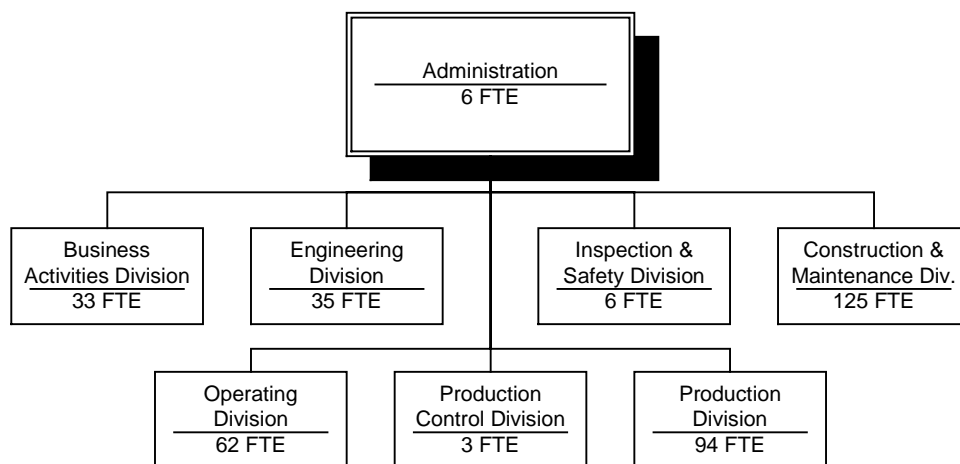
\* PROJECT STATUS: M=project is maintaining current infrastructure; N=Project will result in new development

\*\* PROJECT TIMELINE: P=project is proposed; O=project is ongoing; U=project is one time and underway

\*\*\* IMPACT ON OPERATING BUDGET: AF=additional funding required; RF=results in reduction of funding; NOI=no operating impact

\*\*\* IMPACT ON STAFFING BUDGET: AS=additional staffing required; RS=results in reduction of staffing; NSI=no staffing impact

# PUBLIC LIGHTING



## PUBLIC LIGHTING

### **A GENCY MISSION**

To provide reliable, economical, high quality lighting and energy services that light the streets for safety and are responsive to the needs of the citizens, businesses, and visitors of the City of Detroit.

### **CURRENT FACILITIES**

The Public Lighting Department operates from three (3) main locations:

Administrative offices, warehouse and shops at 9449 Grinnell in Northeast Detroit;

Mistersky Power Station at 5425 West Jefferson in Southwest Detroit; and

Witkowski Operations Center at 1340 Third Avenue in Downtown Detroit.

The department also owns and operates thirty-one (31) substations throughout the City and a steam plant near Herman Kiefer Hospital.

Additionally, Departmental personnel are responsible for numerous transformer rooms in schools, libraries, police stations, freeway pumphouses, etc. in every part of Detroit.

Power is furnished to 1,578 services, which include the facilities of the City of Detroit, the Board of Education, the United States Government, the Michigan Department of Transportation, Wayne County, and other agencies, and a small number of private customers such as privately-owned buildings on Belle Isle.

The Department maintains almost 87,000 street and alley lights, several municipal parking lot installations, 1,000 traffic signal installations, and the digital

PBX telephone system serving Police Headquarters, Police Precincts, and Fire Headquarters.

### **FIVE YEAR HISTORY**

Over the most recent five fiscal years, the Department has engaged in a major and continuing street light improvement program. This includes main street lighting as well as residential lighting improvements. Priorities have included response to residential lighting requests and conversion to Detroit Edison feeds. The majority of the work involved modernization to sodium vapor lights and conversion to Detroit Edison secondary service of over 48,000 lights.

The Department, in conjunction with other agencies, has upgraded Public Lighting Department facilities where streets have been rebuilt or widened, such as St. Aubin between Holbrook and Clay.

New 13.2 kv metalclad switchgear was installed at our Porter Street Substation which allows the PLD to add new services in the downtown area.

Obsolete electromechanical traffic signal controllers have been replaced with solid state devices which allow for greater timing flexibility and improving coordination with adjacent signalized intersections.

We have completed the process of converting our generating units #5 and #6 from oil fired to dual-fired, oil and/or gas at our Mistersky Power Station.

## PUBLIC LIGHTING

### **PROPOSED FIVE YEAR CAPITAL PLAN**

In FY2000-01, the Public Lighting Department is embarking on a major re-vamping of its power generation capacity at the Mistersky Power Station. This modernization strategy will position PLD to be competitive, reliable and efficient. The advantages of this modernization strategy are:

- ✓ Increased reliability of electric generation and delivery of service
- ✓ Reduction of cost of the City's electricity
- ✓ Reduction in power plant maintenance costs

The plan will be implemented in two-phases:

Phrase I of the plan is scheduled to begin in Spring of 2001; the duration of the project is approximately seven months. This phase will involve the installation of two new transmission (tie) lines between the Mistersky Power Plant and Detroit Edison's Waterman Substation. This will bring the total transmission lines to five. The approximate cost of Phase I is \$3.4 million.

Phrase II involves the purchase and installation of 120 MW gas turbine generator(s), for quick start operation, which will replace the currently, old inefficient baseload generation equipment. The new generation equipment will allow for more efficient operations by allowing PLD to run the generators at the time needed versus continuous operation of equipment under the current system. The new equipment will allow for the generation of energy

during periods of high demand or cost. This new equipment requires a start-up time of 10-15 minutes (8 hours or more needed for the current equipment). This will reduce the need for staff from the current levels of 80 people to 20. It is anticipated that all displaced workers will be absorbed by other City Agencies. The project also includes the replacement of the Switch House (which is 60-70 years old) necessary for the successful implementation of the project.

The total project cost of the plan is \$63.8 million. Phase I will be funded with general obligation bonds and Phase II will be funded with limited general obligation bonds. The cost savings from operations (resulting from the reduced maintenance costs and reduction in staffing costs) will be used to repay the bonds.

In the next five years, the Department's capital plans also calls for the replacement of 24kv switchgear at our three main substations – Custer, Ludden and Porter.

A new substation is planned for Belle Isle to service increased electrical loads on the island. Along with the new substation, the island's distribution system will be upgraded.

The Department will replace all of our electric meters with solid state devices that can be read remotely, allowed for our customer billing process to be fully computerized.

We will also continue to upgrade our street lighting to more energy efficient light sources and circuiting.

## PUBLIC LIGHTING

### **INTERDEPARTMENTAL CAPITAL RELATIONSHIPS**

The Public Lighting Department's capital projects generally do not impact other City departments' capital programs. Just the opposite; many other City departments' capital projects impact the Public Lighting Department, such as service extensions to various Housing Department facilities (Herman Gardens, Charles Terrace, etc.) and new Planning Department development projects (Brush Park, East Jefferson Village, etc.)

The Traffic Signal Controller Conversion project is being performed in conjunction with the Detroit Department of Transportation (D-DOT).

In addition, agencies outside of the City impact the Public Lighting Department; most notably, the Michigan Department of Transportation with their freeway bridge rehabilitation project.

### **GOALS FOR CAPITAL PROGRAM**

Deliver reliable, economic, high quality energy (electric and steam) to our customers.

1. Provide reliable, economic, high quality street lighting on city streets.
2. Operate and maintain a reliable, high quality traffic signal system in the city.
3. Operate and maintain an efficient communications system for the Police, Fire, and Public Lighting Departments.
4. Attain compliance with all applicable Federal, State, County, and local environmental and safety requirements.

### **RATIONALE FOR CAPITAL PROGRAM**

The basic rationale for the current capital program is focused on: energy conservation; better night-time visibility for traffic and crime deterrence; improved traffic control; minimizing the City's liability for rusted poles; more efficient use and increased availability of the City's police and fire communications network; increased flexibility in the type of fuel used to produce electric power; and improving reliability of existing generating equipment while reducing costs.

## PUBLIC LIGHTING

### **Mistersky Gas Turbine Installation**

The project calls for the installation of a quick start gas turbine generator having a nominal capacity of 120 MW. The gas turbine generator would be owned and operated by PLD. PLD will retire its existing base load units and truly operate in an interruptible mode that will enable the department to save \$5- \$10 million annually. The total cost of the project is \$51.8 million. The project is estimated to take twelve (12) months to complete.

FY2000-01-Budget- \$51,800,000- Limited General Obligation Bonds

### **Mistersky Switch House Modernization**

The project calls for the installation of a new outdoor switch house to replace the 1930's vintage switch house that currently exists at the Mistersky Power Plant facility. Transmission and sub-transmission lines terminating in the existing switch house will be rerouted to terminate in a new outdoor facility that will be state-of-the art. This project will provide faster automatic switching to eliminate distribution system voltage sags and dips. The total cost of the project is \$12 million. The project is estimated to take twelve months.

FY2000-01-Budget- \$12,000,000- Limited General Obligation Bonds

### **Mistersky Transmission Line Upgrade**

The project calls for the installation of two new 24KV transmission lines with a nominal capacity of 22.7 MW each. The Public Lighting Department's transmission capacity will go from a nominal capacity of 68.1 MW to 113.5 MW. This will enable PLD to have sufficient transmission capacity to cover the entire utility's demand. The total cost of the project is \$3.4 million. Completion of the project is estimated to take five (5) to seven (7) months.

FY2000-01-Budget- \$1,500,000- General Obligation Bonds

### **Brush Park Street Lighting**

Contractor crews will install new street lighting in conjunction with other infrastructure improvements in this new residential development.

FY2000-01-Budget- \$1,000,000- General Obligation Bonds

### **East Jefferson Village**

Contractor crews will install new street lighting in conjunction with other infrastructure improvements in this new residential development.

|         |           |                          |
|---------|-----------|--------------------------|
| 2001-02 | \$800,000 | General Obligation Bonds |
|---------|-----------|--------------------------|



## PUBLIC LIGHTING

### Capital Abatements

PLD crews perform capital work on a daily basis such as new street lighting, condemned pole replacement, and service extensions.

FY2000-01- Budget \$1,800,000- General Obligation Bonds

|         |             |                          |
|---------|-------------|--------------------------|
| 2001-02 | \$1,800,000 | General Obligation Bonds |
| 2002-03 | \$1,800,000 | General Obligation Bonds |
| 2003-04 | \$1,800,000 | General Obligation Bonds |
| 2004-05 | \$1,800,000 | General Obligation Bonds |
| 2005-06 | \$1,800,000 | General Obligation Bonds |

### Tree Trimming

Contractor crews trim trees to maintain clearance from overhead circuit views. This results in improved system reliability.

FY2000-01- Budget \$1,800,000- General Obligation Bonds

|         |             |                          |
|---------|-------------|--------------------------|
| 2001-02 | \$1,000,000 | General Obligation Bonds |
|---------|-------------|--------------------------|

### System Control and Data Acquisition (SCADA)

This project will replace a 28-year old SCADA system. The new system will have the ability to monitor generation, transmission, distribution, remote breakers and other remote equipment, thereby greatly enhancing the reliability of our system.

FY2000-01- Budget \$755,000- General Obligation Bonds

|         |            |                          |
|---------|------------|--------------------------|
| 2001-02 | \$ 500,000 | General Obligation Bonds |
| 2002-03 | \$ 700,000 | General Obligation Bonds |
| 2003-04 | \$ 600,000 | General Obligation Bonds |

### Street Lighting Survey & Pole Tagging

Contractor surveys the PLD street lighting system quarterly for outages. Information gathered will be used for making needed repairs and improvements to the system. Contractor will also tag PLD metal street lighting poles for identification when reporting street lighting outages.

\$1,650,000 Unprogrammed

### Residential Street Lighting

The continuing program is aimed at adding 12,000 residential lights at an average cost of \$1,900 each to meet minimum standards set by the Illuminating Engineering Society.  
FY2000-01- Budget \$300,000- General Obligation Bonds

|         |              |                          |
|---------|--------------|--------------------------|
| 2001-02 | \$ 1,000,000 | General Obligation Bonds |
| 2002-03 | \$ 1,000,000 | General Obligation Bonds |

## PUBLIC LIGHTING

|         |              |                          |
|---------|--------------|--------------------------|
| 2003-04 | \$ 1,000,000 | General Obligation Bonds |
| 2004-05 | \$ 1,000,000 | General Obligation Bonds |
| 2005-06 | \$ 1,000,000 | General Obligation Bonds |
|         | \$17,500,000 | Unprogrammed             |

### Vehicle Replacement

We must begin the process of evergreening our fleet of vehicles by either buying or leasing.

|             |              |
|-------------|--------------|
| \$1,200,000 | Unprogrammed |
|-------------|--------------|

### Remote Electric Meter Reading

Replace existing analog electric meters with electronic meters that may be read remotely or with a hand-held meter reading device. The metering data collected can be entered electronically to a computer for generation of customer's electric bill

|         |            |                          |
|---------|------------|--------------------------|
| 2001-02 | \$ 150,000 | General Obligation Bonds |
| 2002-03 | \$ 200,000 | General Obligation Bonds |
| 2003-04 | \$ 400,000 | General Obligation Bonds |

### Service Extensions

This is a continuing program. Each year the details of the requirements are submitted, based on the needs of City Departments and other agencies.

|         |              |                          |
|---------|--------------|--------------------------|
| 2001-02 | \$ 1,000,000 | General Obligation Bonds |
| 2002-03 | \$ 1,000,000 | General Obligation Bonds |
| 2003-04 | \$ 1,000,000 | General Obligation Bonds |
| 2004-05 | \$ 1,000,000 | General Obligation Bonds |
| 2005-06 | \$ 1,000,000 | General Obligation Bonds |
|         | \$10,000,000 | Unprogrammed             |

### Main Street Lighting

There are 15,000 less than the optimum number of main street lights required to illuminate city streets to minimum standards. The total project cost of \$57,000,000 is based on an average estimated installation cost of \$3,800.

|         |              |                          |
|---------|--------------|--------------------------|
| 2001-02 | \$ 1,000,000 | General Obligation Bonds |
| 2002-03 | \$ 1,000,000 | General Obligation Bonds |
| 2003-04 | \$ 1,000,000 | General Obligation Bonds |
| 2004-05 | \$ 1,000,000 | General Obligation Bonds |
| 2005-06 | \$ 1,000,000 | General Obligation Bonds |
|         | \$52,000,000 | Unprogrammed             |

### Substations Additions and Improvements

This is a continuing program. Each year the details of the year's requirement are submitted based on projected system load growth and specific expansion projects.

|         |              |                          |
|---------|--------------|--------------------------|
| 2001-02 | \$ 1,000,000 | General Obligation Bonds |
|---------|--------------|--------------------------|

## PUBLIC LIGHTING

|         |              |                          |
|---------|--------------|--------------------------|
| 2002-03 | \$ 1,000,000 | General Obligation Bonds |
| 2003-04 | \$ 1,000,000 | General Obligation Bonds |
| 2004-05 | \$ 1,000,000 | General Obligation Bonds |
| 2005-06 | \$ 1,000,000 | General Obligation Bonds |
|         | \$12,670,000 | Unprogrammed             |

### Development Projects

This is a continuing program. Each year the details of the year's requirements are submitted based on anticipated and specific development projects.

|         |              |                          |
|---------|--------------|--------------------------|
| 2001-02 | \$ 100,000   | General Obligation Bonds |
| 2002-03 | \$ 100,000   | General Obligation Bonds |
| 2003-04 | \$ 100,000   | General Obligation Bonds |
| 2004-05 | \$ 100,000   | General Obligation Bonds |
| 2005-06 | \$ 100,000   | General Obligation Bonds |
|         | \$ 9,500,000 | Unprogrammed             |

### Substation Improvements- Battery Replacement

Many substation supervisory and control batteries and their chargers have reached the end of their 20-30 year life span. This program will replace them with new lead calcium batteries and chargers.

|         |           |                          |
|---------|-----------|--------------------------|
| 2001-02 | \$125,000 | General Obligation Bonds |
| 2002-03 | \$125,000 | General Obligation Bonds |

### Metal and Wood Pole Replacements

Some 3,000 steel street lighting poles are badly rusted and structurally unsound. These poles are approximately 55 years old and, during the past few years, a significant number have fallen or been knocked or taken down due to their dangerous condition. In addition, there are an estimated 1,500 condemned wooden poles that need replacement.

|         |              |                          |
|---------|--------------|--------------------------|
| 2001-02 | \$ 100,000   | General Obligation Bonds |
| 2002-03 | \$ 100,000   | General Obligation Bonds |
| 2003-04 | \$ 100,000   | General Obligation Bonds |
| 2004-05 | \$ 100,000   | General Obligation Bonds |
| 2005-06 | \$ 100,000   | General Obligation Bonds |
|         | \$ 7,700,000 | Unprogrammed             |

### Belle Isle Substation & Distribution

The Belle Isle Substation is currently operating at capacity. It was originally designed for when the island was strictly a park with small loads. Any increase in the existing loads or the creation of new development on the island will require the building of a larger substation and the installation of a new distribution network.

|         |            |                          |
|---------|------------|--------------------------|
| 2001-02 | \$ 300,000 | General Obligation Bonds |
| 2002-03 | \$ 300,000 | General Obligation Bonds |
| 2003-04 | \$ 300,000 | General Obligation Bonds |
| 2004-05 | \$ 300,000 | General Obligation Bonds |

## PUBLIC LIGHTING

|         |              |                          |
|---------|--------------|--------------------------|
| 2005-06 | \$ 300,000   | General Obligation Bonds |
|         | \$ 5,500,000 | Unprogrammed             |

### **Historic Area/Special Request Lighting**

As part of the Historic districts Ordinance incorporating these areas, the original character of the lighting mechanism must be maintained in maintenance or replacement work. Designated areas include: Boston Edison area; North Rosedale Park; Rosedale Park; Grandmont Subdivision; Sherwood Forest; Greenacres, Palmer Park; and Berry Subdivision.

|              |              |
|--------------|--------------|
| \$20,000,000 | Unprogrammed |
|--------------|--------------|

### **Traffic Signal Controller Conversions**

Five hundred (500) existing traffic signal intersections have older electro-mechanical controllers, which are unreliable and difficult to maintain. It is planned to replace 100 controllers per year in conjunction with the Department of Transportation's capital program.

|         |             |                          |
|---------|-------------|--------------------------|
| 2001-02 | \$ 500,000  | General Obligation Bonds |
| 2002-03 | \$1,000,000 | General Obligation Bonds |
| 2003-04 | \$1,000,000 | General Obligation Bonds |
| 2004-05 | \$1,000,000 | General Obligation Bonds |
| 2005-06 | \$1,000,000 | General Obligation Bonds |
|         | \$3,000,000 | Unprogrammed             |

### **Traffic Signal Feed Revisions**

The existing traffic signal power feed capacity is inadequate. New features have been added to traffic signals that increase their power demand. New features being installed include larger, brighter lamps and illuminated street signs. More and more of these new features are being added with each intersection modernization.

|         |              |                          |
|---------|--------------|--------------------------|
| 2001-02 | \$ 500,000   | General Obligation Bonds |
| 2002-03 | \$ 500,000   | General Obligation Bonds |
| 2003-04 | \$ 500,000   | General Obligation Bonds |
| 2004-05 | \$ 500,000   | General Obligation Bonds |
| 2005-06 | \$ 500,000   | General Obligation Bonds |
|         | \$10,000,000 | Unprogrammed             |

# PUBLIC LIGHTING

(000's OMITTED)

| Projects  | Project Status | Project Timeline | Impact on Budget |  | Funding Source | Authorized Unissued | (Budget) 2000-01 | ***** 5 Year Capital Plan ***** |         |         |         |         |          | Unprogrammed |
|---|----------------|------------------|------------------|--|----------------|---------------------|------------------|---------------------------------|---------|---------|---------|---------|----------|--------------|
|   |                |                  |                  |  |                |                     |                  | 2001-02                         | 2002-03 | 2003-04 | 2004-05 | 2005-06 |          |              |
| <b>ELECTRIC UTILITY:</b>                          |                |                  |                  |  |                |                     |                  |                                 |         |         |         |         |          |              |
| Mistersky Gas Turbine Installation                | N              | P                | RF/RS            |  | L.G.O.         |                     | \$51,800         |                                 |         |         |         |         |          |              |
| Mistersky Switch House Modernization              | M              | P                | NOI/NSI          |  | L.G.O.         |                     | 12,000           |                                 |         |         |         |         |          |              |
| Mistersky Heater Replacement/<br>Turbine Overhaul | N              | P                | NOI/NSI          |  | G.O.           |                     | 1,500            |                                 |         |         |         |         |          |              |
| Brush Park Street Lighting                        | N              | U                | NOI/NSI          |  | G.O.           |                     | 1,000            |                                 |         |         |         |         |          |              |
| East Jefferson Village                            | N              | U                | NOI/NSI          |  | G.O.           | \$800               |                  | \$800                           |         |         |         |         |          |              |
| Capital Abatement                                 | M              | O                | RF/NSI           |  | G.O.           | 7,445               | 1,800            | 1,800                           | \$1,800 | \$1,800 | \$1,800 | \$1,800 |          |              |
| Tree Trimming                                     | M              | O                | RF/NSI           |  | G.O.           | 1,000               | 1,800            | 1,000                           |         |         |         |         |          |              |
| S.C.A.D.A. System                                 | M              | O                | RF/NSI           |  | G.O.           | 1,800               | 755              | 500                             | 700     | 600     |         |         |          |              |
| Street Lighting Survey & Pole Tagging             | M              | O                | NOI/NSI          |  | G.O.           |                     |                  |                                 |         |         |         |         | \$1,650  |              |
| Residential Street Lighting                       | M              | O                | NOI/NSI          |  | G.O.           | 4,000               | 300              | 1,000                           | 1,000   | 1,000   | 1,000   | 1,000   | 17,500   |              |
| Vehicle Replacement                               | M              | O                | NOI/NSI          |  | G.O.           |                     |                  |                                 |         |         |         |         | 1,200    |              |
| Remote Electric Meter Reading                     | M              | U                | RF/NSI           |  | G.O.           | 750                 |                  | 150                             | 200     | 400     |         |         |          |              |
| Sub-Totals (Electric Utility) page 1              |                |                  |                  |  |                | \$15,795            | \$70,955         | \$5,250                         | \$3,700 | \$3,800 | \$2,800 | \$2,800 | \$20,350 |              |
| Funding Source Summary (Electric Utility) page 1  |                |                  |                  |  |                |                     |                  |                                 |         |         |         |         |          |              |
| General Obligation Bonds                          |                |                  |                  |  | G.O.           | \$15,795            | \$7,155          | \$5,250                         | \$3,700 | \$3,800 | \$2,800 | \$2,800 | \$20,350 |              |
| Other Source (Limited G. O. Bonds)                |                |                  |                  |  | O.S.           |                     | \$63,800         | \$0                             | \$0     | \$0     | \$0     | \$0     | \$0      |              |

\* PROJECT STATUS: M=project is maintaining current infrastructure; N=Project will result in new development

\*\* PROJECT TIMELINE: P=project is proposed; O=project is ongoing; U=project is one time and underway

\*\*\* IMPACT ON OPERATING BUDGET: AF=additional funding required; RF=results in reduction of funding; NOI=no operating impact

\*\*\* IMPACT ON STAFFING BUDGET: AS=additional staffing required; RS=results in reduction of staffing; NSI=no staffing impact

# PUBLIC LIGHTING

(000's OMITTED)

|  | *              | **               | ***              |  |                |                     |                  | ***** 5 Year Capital Plan ***** |         |         |         |         |              |
|--|----------------|------------------|------------------|--|----------------|---------------------|------------------|---------------------------------|---------|---------|---------|---------|--------------|
| Projects   | Project Status | Project Timeline | Impact on Budget |  | Funding Source | Authorized Unissued | (Budget) 2000-01 | 2001-02                         | 2002-03 | 2003-04 | 2004-05 | 2005-06 | Unprogrammed |
| ELECTRIC UTILITY:                                |                |                  |                  |  |                |                     |                  |                                 |         |         |         |         |              |
| Service Extensions                               | M              | O                | NOI/NSI          |  | G.O.           | \$4,000             |                  | \$1,000                         | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$10,000     |
| Main Street Lighting                             | M              | O                | RF/NSI           |  | G.O.           | 4,000               |                  | 1,000                           | 1,000   | 1,000   | 1,000   | 1,000   | 52,000       |
| Substation Additions and Improvements            | M              | O                | NOI/NSI          |  | G.O.           | 3,000               |                  | 1,000                           | 1,000   | 1,000   | 1,000   | 1,000   | 12,670       |
| Development Projects                             | N              | P                | AF/AS            |  | G.O.           | 3,000               |                  | 100                             | 100     | 100     | 100     | 100     | 9,500        |
| Substation Battery Replacement                   | M              | O                | NOI/NSI          |  | G.O.           | 250                 |                  | 125                             | 125     |         |         |         |              |
| Rusted Metal & Condemned Wooden Pole Repalcement | M              | O                | RF/NSI           |  | G.O.           | 2,000               |                  | 100                             | 100     | 100     | 1,000   | 1,000   | 7,700        |
| Belle Isle Substation & Distribution             | N              | P                | RF/NSI           |  | G.O.           | 3,000               |                  | 300                             | 300     | 300     | 300     | 300     | 5,500        |
| Historic Area (Special Lighting Request)         | M              | P                | AF/NSI           |  | G.O.           |                     |                  |                                 |         |         |         |         | 20,000       |
| Sub-Totals (Electric Utility) page 2             |                |                  |                  |  |                | \$19,250            | \$0              | \$3,625                         | \$3,625 | \$3,500 | \$4,400 | \$4,400 | \$117,370    |
| Funding Source Summary (Electric Utility) page 2 |                |                  |                  |  |                |                     |                  |                                 |         |         |         |         |              |
| General Obligation Bonds                         |                |                  |                  |  | G.O.           | \$19,250            | \$0              | \$3,625                         | \$3,625 | \$3,500 | \$4,400 | \$4,400 | \$117,370    |
|  |                |                  |                  |  |                |                     |                  |                                 |         |         |         |         |              |
| ELECTRIC UTILITY TOTALS                          |                |                  |                  |  |                | \$35,045            | \$70,955         | \$8,875                         | \$7,325 | \$7,300 | \$7,200 | \$7,200 | \$137,720    |
| Funding Source Summary (Electric Utility)        |                |                  |                  |  |                |                     |                  |                                 |         |         |         |         |              |
| General Obligation Bonds                         |                |                  |                  |  | G.O.           | \$35,045            | \$7,155          | \$8,875                         | \$7,325 | \$7,300 | \$7,200 | \$7,200 | \$137,720    |
| Other Source (Limited G. O. Bonds)               |                |                  |                  |  | O.S.           |                     | \$63,800         | \$0                             | \$0     | \$0     | \$0     | \$0     | \$0          |

\* PROJECT STATUS: M=project is maintaining current infrastructure; N=Project will result in new development

\*\* PROJECT TIMELINE: P=project is proposed; O=project is ongoing; U=project is one time and underway

\*\*\* IMPACT ON OPERATING BUDGET: AF=additional funding required; RF=results in reduction of funding; NOI=no operating impact

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## PUBLIC LIGHTING

| Projects  | *<br>Project<br>Status | **<br>Project<br>Timeline | ***<br>Impact<br>on Budget |  | Funding<br>Source | Authorized<br>Unissued | (Budget)<br>2000-01 | ***** 5 Year Capital Plan ***** |         |         |         |         | Unprogrammed |
|---|------------------------|---------------------------|----------------------------|--|-------------------|------------------------|---------------------|---------------------------------|---------|---------|---------|---------|--------------|
|   |                        |                           |                            |  |                   |                        |                     | 2001-02                         | 2002-03 | 2003-04 | 2004-05 | 2005-06 |              |
| <b>TRAFFIC SIGNAL UTILITY:</b>                  |                        |                           |                            |  |                   |                        |                     |                                 |         |         |         |         |              |
| Traffic Signal Controller Upgrade               | M                      | O                         | RF/NSI                     |  | G.O.              | \$3,000                |                     | \$500                           | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$3,000      |
| Traffic Signal Feed Revisions                   | M                      | P                         | RF/NSI                     |  | G.O.              | 1,000                  |                     | 500                             | 500     | 500     | 500     | 500     | \$10,000     |
| Sub-Totals (Traffic Signal Utility)             |                        |                           |                            |  |                   | \$4,000                | \$0                 | \$1,000                         | \$1,500 | \$1,500 | \$1,500 | \$1,500 | \$13,000     |
| Funding Source Summary (Communication Utility): |                        |                           |                            |  |                   |                        |                     |                                 |         |         |         |         |              |
| General Obligation Bonds                        |                        |                           |                            |  | G.O.              | \$4,000                | \$0                 | \$1,000                         | \$1,500 | \$1,500 | \$1,500 | \$1,500 | \$13,000     |
| GRAND TOTALS                                    |                        |                           |                            |  |                   | \$39,045               | \$70,955            | \$9,875                         | \$8,825 | \$8,800 | \$8,700 | \$8,700 | \$150,720    |
| Funding Source Summary:                         |                        |                           |                            |  |                   |                        |                     |                                 |         |         |         |         |              |
| General Obligation Bonds                        |                        |                           |                            |  | G.O.              | \$39,045               | \$7,155             | \$9,875                         | \$8,825 | \$8,800 | \$8,700 | \$8,700 | \$150,720    |
| Other Source (Limited G. O. Bonds)              |                        |                           |                            |  | O.S.              |                        | \$63,800            | \$0                             | \$0     | \$0     | \$0     | \$0     | \$0          |

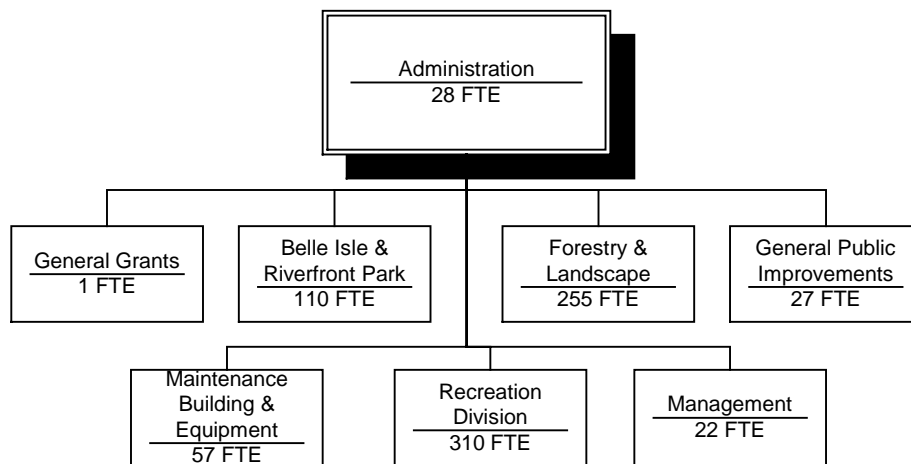
\* PROJECT STATUS: M=project is maintaining current infrastructure; N=Project will result in new development

\*\* PROJECT TIMELINE: P=project is proposed; O=project is ongoing; U=project is one time and underway

\*\*\* IMPACT ON OPERATING BUDGET: AF=additional funding required; RF=results in reduction of funding; NOI=no operating impact

\*\*\* IMPACT ON STAFFING BUDGET: AS=additional staffing required; RS=results in reduction of staffing; NSI=no staffing impact

# RECREATION





## RECREATION

### **AGENCY MISSION**

“To be a model, professionally-based, urban recreation department which utilizes all resources within the community to provide

safe, clean parks and facilities that improve and stabilize neighborhoods, enhance the delivery of core services, inspire our citizens to reach their greatest potential and attract visitors.”

### **CURRENT FACILITIES**

The Recreation Department provides opportunities for the public to participate in organized and informal leisure activities in recreation centers, parks and playgrounds, public schools and related facilities. Activities include the traditional sports leagues and tournaments, swim programs, fitness activities, cultural arts, special events and socialization programs. An array of related human services is made available through a multi-service center approach.

Major facilities include: Belle Isle, Palmer, Chandler, Rouge and Chene Parks, Hart Plaza, Eastern Market, three (3) marinas, six (6) golf courses and three (3) cemeteries. Three hundred-ninety (391) properties require regular mowing and maintenance, as do over 13,000 blocks of curb-strip trees. We operate 36 recreation centers, 200 outdoor basketball courts, 150 tennis courts and the Detroit Recreation Camp located in Brighton, Michigan.

The average age of our recreation centers is 44 years. Even the most recently built center, Coleman A. Young, was constructed 18 years ago. Five of the centers are over 70 years old, and only two were built less than 20 year ago. As a result, the maintenance, repair and renovation of these facilities are an important component of our Capital Program.

The Department also operates the Lenox Handicapped Center for the physically and mentally challenged populations of Detroit. At the time of its construction, thirty years ago, the building was considered state of the art in accessibility design. Within the last five years, an accessible play area was constructed adjacent to the center, complete with the highest quality safety surfacing available.

In addition to the management, maintenance and repair of buildings and park facilities, the Recreation Dept. conducts, administers and services special events such as the DTE Bloomfest, Grand Prix Auto Races, Hydroplane Boat Races, Riverfront Festivals, and various other events.

### **FIVE YEAR HISTORY**

During the last five years, the Department has proceeded with renovations to regional facilities such as Belle Isle, Chandler and Grand Circus Park. We have even added new venues such as Eastern Market and Mt Elliott Park. However, the primary focus of our capital improvement efforts has been directed to the upgrading of the parks and centers which service neighborhoods and their residents.

We have been assisted in our park development/renovation efforts by both the public and private sectors. During the last five years, Recreation actively developed partnerships with foundations such as Piston Palace, Think Twice, Skillman and Kresge, so that new playstructures and other amenities could be added to the parks. The “Recapitalization Project,” allowed us to coalesce with a consortium of foundations and developers. Our joint efforts have already resulted in the renovation of Considine Center. Renovation and construction on Lipke and Northwest

## RECREATION

Activities Center are underway as the next phase of that project. Improvements to the Hawthorne site are also part of the Recap Project. Businesses such as Saturn, Allstate, Home Depot, Lear and the Ford Land Development Corporation greatly expanded the scope of improvements we were able to make to our parks and facilities. Finally, we activated community organizations to participate in this process by using their volunteer efforts to assist in the maintenance and monitoring of the parks and buildings.

### ***Neighborhood Park Renovation/Development***

Over the last five years, support from the Piston Palace made it possible to install playscapes in 30 neighborhood parks, including:

Wells  
Pingree  
Kemeny  
Luger  
Van Antwerp  
Joe Louis  
Dequindre-Grixdale  
Lipke  
Stoepel #1  
Riordan  
Thirkell  
McShane  
Vernor  
Lafayette-Plaisance  
St. Hedwig  
Skinner  
Troester-Hayes  
Gorham  
Delores Bennett  
Zussman  
Corrigan  
Karaniewski  
Optimist-Stout  
Louis Stone  
Bradby  
Brewer  
Howarth

Marusso  
Kelly  
Cannon

The Department did the design and site work and landscaping at these sites. We also installed benches, tables, new fencing, swings, climbers and safety surfacing. We re-surfaced and made repairs to bring ball diamonds, tennis and basketball courts and playfields up to modern standards of accessibility and safety.

Thanks to the Saturn Corporation, Heilman, Chandler and Patton Parks also received new playscapes. Think Twice, Home Depot, Lear Corporation and Allstate made similar improvements possible at neighborhood parks including Military Regular, Boyer, Outer Drive-Burgess, Schuster and Charlotte-4<sup>th</sup>. Some of these efforts also included a “community build day” where the employees of the sponsoring businesses joined with neighborhood residents and our staff to assemble the play equipment, complete the site work and do the landscaping. Thus a vacant or deteriorated park was ‘miraculously’ converted, in the course of a single day, to an appealing play area.

A variety of renovation work has been done in our parks since 1995. During this time, we have constructed ball diamonds, basketball and tennis courts and other sports facilities. We have installed everything from playscapes, climbers, swings and safety surfacing, to sculptures, irrigation systems, walking paths, benches and picnic tables, signage, sewers, curbs, trees, shrubs and flowers. Where necessary, buildings on park lands have been removed. At Peck Park, even a swimming pool was demolished for the future construction of an ice skating rink. At five sites, split rail fencing was installed. In

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addition to those previously mentioned parks at which renovation and development occurred, the following should be added:

Bishop  
Military Regular  
Bringard Boulder  
Burns Lambert  
Cannon  
Clark  
DeHoratiis  
Keating  
Riverside  
Maheras Gentry  
Warren-Mack Blvds.  
O'Hair  
Russell Woods  
St. Aubin  
Schuster  
Lakewood East  
Stockton  
Balduck Tobbage Hill

### ***Making Parks Accessible***

We created five handicapped accessible playgrounds, thanks to bond money from the Michigan Department of Natural Resources. The playgrounds were constructed at A.B. Ford, Belle Isle, Chandler, Palmer and Rouge Parks. These projects included accessible entrances to the parks, accessible play equipment and the installation of rubberized safety surfacing.

### ***Parking Lot Improvements & Lighting***

Parking lot renovations were completed at Adams Butzel, Kronk, South Rademacher and O'Shea Centers and at Brennan Pool in Rouge Park. The parking lots at the Belle Isle Conservatory and Nature Center were also re-done. Lighting installation was completed at Lasky Center parking lot, Heilman Ice Rink and Center and St. Hedwig Center.

### ***Renovation/Construction at our Major***

### ***Parks/Venues***

#### **Belle Isle**

Detroit's island park, ranked among the top 10 parks in the United States, is a jewel in the middle of one of the world's busiest waterways, has undergone major renovations and construction. These efforts have cost over \$12 million. We have installed three waterslides and a pool at the beach, made improvements to the lakes and canal systems and stabilized the shoreline. We have repaired a number of the monuments and sculptures and have installed new and attractive signage throughout the island. Renovations have been made to the Casino, "White House" and Flynn Pavillion, and to several picnic shelters and comfort stations. We completely re-vamped the exhibits in the Nature Center and re-surfaced the parking lot there and at the Casino. We instituted a drainage project for the Broad Lawn areas and the cricket field, made repairs to the fishing pier and restocked deep water habitat in the island's lakes. We also prepared a new Belle Isle Plan to renovate the entire island park. Thanks to support from the Ford Land Development Corporation, a state of the art golf practice facility has been created on the island, complete with driving range and short game practice facility.

#### **Grand Circus Park**

We completed a \$2.4 renovation of Grand Circus Park in downtown Detroit. The Edison and Alger Fountains were restored, as were the Maybury and Pingree statues. Through attractive new landscaping, signage and fixtures -- and the removal of unsightly heating/cooling units and an obsolete parking ramp -- we were able to open up vistas into the park. The addition of new lighting also helped create an appealing public space that links the downtown to the new theater/stadia district. On December 31, 1999, a fresh New Years Eve tradition was created for

## RECREATION

the City, in celebration of the new millenium, with the installation in the park of the Millenium Bell, the work of two young local artists. The millenium bell was funded with private grants and community support.

### **Mt. Elliott**

Opened in June 1997, Mt. Elliott Park was the most recent of our riverfront parks to be constructed. It is part of the Department's effort to link all the existing parks from the Ambassador Bridge to the MacArther Bridge leading to Belle Isle. Mt. Elliott is located at the river's edge, near the former Uniroyal site, the Detroit Coast Guard Station and the old Lighthouse Storage Depot. Its river walkway and benches make it ideal for fishing, relaxing with a good book or indulging in a period of quiet reflection. The park's rolling hillside creates an open play field that is ideal for a game of frisbee or an afternoon of kite-flying.

### **Palmer Park**

A favorite venue of residents from all parts of the city and surrounding suburbs, Palmer Park was the site of much renovation during the last five years. A sensory garden was created in the park and a playscape was added to the park's amenities. We also renovated the tennis courts and demolished the old refractory

### **Eastern Market**

The Market was placed under the jurisdiction of Recreation. We began immediately to assist the Eastern Market Development Committee to maximize marketing, public relations and land use to benefit all of the Market's stakeholders, vendors, associations and the public. The Project for Public Spaces conducted a study and did market research to assist with the creation of an overall plan for improvements to the Market. Analysis of the study and research is still underway.

To enhance public use of the Market, the Department has initiated several special events, including Christmas Awards Affair, Apple Day, Antique Auto Fest, A Blooming Affair and the AIDS Benefit Fashion Show. Renovations have been made to four of the sheds that have also been re-painted. The famous Eastern Market graphics have also been repainted. We have updated the lighting and staged a grand opening for a new restaurant in Shed #5.

### **Detroit Recreation Camp**

A grant from the Michigan Department of Natural Resources has permitted the Department to make major inroads in the total renovation of the Detroit Recreation Camp. To date \$2.95 million has been spent to complete the following items:

- Renovation to three cabins

- New roof for South Dining Hall
- Walkways

- Renovations of North Dining Hall

- Relocation of electrical system

- Entry gates

- Construction of camper cabin

- Manager Home & Welcome Building.

- Septic System

### **Facility Renovation/Construction**

#### ***Center Renovations***

The repair and rehabilitation of our centers is an on-going challenge. Highlights of those efforts include major renovations to the aforementioned Re Capitalization Centers (Considine, Lipke and Northwest Activities Center), as well as to O'Shea, Clemente, Young and Kronk Centers. In addition, McCabe Field House, Huber Maintenance Facility and Gatliff Bathhouse all underwent renovations in the past five years. The work has run the gamut from refinishing floors to replacing shower facilities, converting storage rooms

## RECREATION

to exercise space, installing heating units and pool filtration devices, to replacing the outer “skin” of a building and installing new skylights and barrel glass roofs.

### ***Roof Repairs & Replacements***

The age of our buildings has meant an almost constant need to address roof problems. During the last five years, complete roof replacements were done at Young, Cannon and Clemente Centers, as well as at the Northwest Activities Center. In similar fashion, full roofs were replaced at the West District Office, McCabe Field House and the Administration Building at Chene Park. The maintenance building and three picnic shelters at Clark Park also received new roofs during this period.

Partial roof replacement or repairs were accomplished at Adams Butzel, Considine, Crowell, O’Shea and Kronk Centers and at the Huber Maintenance Facility. The roof over the pool at Johnson Center was also replaced. We installed roof top humidifiers at Heilman Center to prevent deterioration of the roof, removed the burned out roof at Jayne and began re-roofing efforts at the South District Offices on Piquette.

### ***Remodeling of Comfort Stations***

Belle Isle’s Stone and Shady Nook comfort stations were renovated. So too were those at Chandler, Patton and Henderson Parks and Jayne and Bishop Playfields.

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### **FIVE YEAR HISTORY**

#### **Grant Supported Projects During the Last Five Years**

| <b>Grant Source</b>                          | <b>Project</b>   | <b>City Match</b>         | <b>Grant Amount</b>       | <b>Total</b>               |
|--|--|---------------------------|---------------------------|----------------------------|
| TEA 21 (Transportation Efficiency Act Grant) | Non Motorized Masterplan                                     | \$78,000                  | 312,000                   | \$390,000                  |
| TEA 21                                       | Atwater Street Bike Route @ Cobo                             | 99,000                    | 392,000                   | 491,000                    |
| TEA 21                                       | East Riverfront - Bike Route                                 | 47,474                    | 189,899                   | 237,373                    |
| ISTEA (Transportation Grant)                 | Rouge Park Bike Path & Erosion Control                       | 177,351                   | 156,987                   | 334,338                    |
| CZM (Coastal Zone Management)                | Belle Isle Fishing Pier                                      | 22,000                    | 22,000                    | 44,000                     |
| CZM  | Belle Isle Nature Center                                     | 49,273                    | 30,000                    | 79,273                     |
| CZM  | Lakewood E. Prk  | 50,000                    | 50,000                    | 100,000                    |
| RPO (Rouge Park)                             | Rouge Valley Parks<br>Rouge, Patton, Rogell,<br>Eliza Howell | 128,500                   | 556,500                   | 685,000                    |
| ACOE (Army Corps of Engineers) Sec 14        | Belle Isle Shore-line Stabilization                          | 475,000                   | 875,000                   | 1,305,000                  |
| MNRTF (Mich. Natural Resources Trust Fund)   | Riverside Park   | 500,000                   | 500,000                   | 1,000,000                  |
| GLFT (Great Lakes Fishery Trust)             | Riverside Park   | 500,000                   | 500,000                   | 1,000,000                  |
| CMI (Clean Michigan Initiative)              | Farwell Recreation Center                                    | 750,000                   | 750,000                   | 1,500,000                  |
| Waterways Grant                              | Henderson Marina   | 1,500,000                 | 4,500,000                 | 6,000,000                  |
| <b><u>TOTAL</u></b>                          |  | <b><u>\$4,376,598</u></b> | <b><u>\$8,834,386</u></b> | <b><u>\$13,210,984</u></b> |

## RECREATION

### **PROPOSED FIVE YEAR CAPITAL PLAN**

The Proposed Five Year Capital Program continues emphasis on building renovation and facility improvements. The 2001-2006 Fiscal Years projected costs in the Capital Agenda for these proposed improvements are estimated at \$.

#### **Re-Capitalization Projects**

One of the major initiatives of the Recreation Department is the Recreation Center Recapitalization Project. Working with various public and private funding agencies, the objectives of this project include:

- Addressing high-priority needs
- Engaging in new forms of support & community outreach
- Establishing a long-term model for public/private capital investment efforts
- Matching facility renovations with existing or potential community support structures
- Support for past and present initiatives of private funding agencies

The project involves the renovation of four (4) recreation sites: Considine Recreation Center, Northwest Activities Center, Lipke Recreation Center and Hawthorne site. The planning process used for Considine Center will be replicated at the other locations. These renovated facilities will serve as focal points in their neighborhoods because of the process used to determine the scope of renovations and the extensive network of organizations and individuals involved.

#### **Capital Agenda Categories**

The Recreation Department's Capital Agenda is subdivided into the following categories:

- Neighborhood Buildings
- Neighborhood Parks & Landscape

Riverfront  
Belle Isle  
Rouge Park & Rouge Valley  
Regional Facilities  
Land Acquisition – Scattered Sites

#### **Neighborhood Buildings**

Proposed major neighborhood building renovation projects will enable Recreation to respond to needs for extensive structural, roof, mechanical and pool area repairs and replacements. We will address issues such as extensive moisture damage, renovations to heating and cooling systems, electrical, plumbing and cooling system renovations and security system upgrades. Roof repairs or replacements will extend the life of departmental buildings and are required on a number of facilities. Projects we expect to initiate include, but are not limited to the following:

Young Center  
Clemente Center  
Patton Center  
Kronk Center  
Lipke Center  
Huber Maintenance Repair & Storage Facility  
Piquette S. District & Carpentry Shop  
Brennan Pool  
O'Shea  
Palmer Park  
Cannon

In addition, work will continue to restore the Detroit Recreation Camp in Brighton, Michigan to year round use. Through Support Facility Improvement efforts, it will be possible to replace heating and lighting systems, install air conditioning, do landscaping and bring buildings up to ADA standards. Support Services will allow us to assess properties and their mechanical and electrical systems and development an improvement plan. We eventually hope to re-open closed centers,

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build a new westside center, as well as one in the Jefferson-Chalmers community on the eastside of the City, if funding becomes available. We would also like to provide a gymnasium, senior citizen area and other recreation spaces at Heilmann Center, if funding permits.

The Department's current policy regarding American with Disabilities Act (ADA) compliance:

- a. As existing buildings are renovated, they will be brought into compliance with ADA requirements.
- b. New construction shall be designed and built in compliance with ADA requirements.
- c. As funding permits, outdoor facilities will be upgraded for ADA compliance.

### **Neighborhood Parks and Landscapes**

Renovations, upgrades and improvements to Neighborhood Parks and Landscapes are Recreation Department priorities. The Park Development Unit is the Recreation Department's construction work force. This unit enables the Department to do playground development including the rehabilitation of smaller, existing neighborhood parks and playfields. These efforts include installation of play equipment, replacement and/or repair of other park amenities such as swings, benches, tables, fencing, etc.

Larger rehabilitation projects, such as Grand Circus Park and Bishop, Manz and Patton playfields, are usually contracted out and are often grant funded. Grant matches and additional local costs for grant projects are also included in the Major Park Redevelopment category. Other significant projects include installation of ADA approved play equipment, safety surfacing, encapsulating lead paint on play apparatus and protective spacing of equipment to improve user enjoyment, health and safety. Additional walking paths in each district and

enhanced track facilities will provide a central location for the Recreation Department's track program. Other important Parks and Landscapes projects include planting of trees on boulevards, parks and streets, parking lot and court resurfacing and the repair and improvement of lighting at sports fields and other outdoor athletic sites. This work extends facility life, increases usage and improves participant enjoyment. Other projects under Neighborhood Parks and Landscapes include the construction of a parking lot at McCabe Field House, improvements to the greens, tees and cart paths at the Rogell Golf Course and support services such as surveys and engineering, geo-technical, and historical conservation work.

Future plans also entail the construction of two over-the-expressway parks. One would be built over the John Lodge freeway linking the Jeffries Homes and the Wigle Recreation Center. The other park would extend over I-375 and would connect the Gratiot Central Market and the Eastern Market.

### **Riverfront Projects & Shoreline Improvements**

Riverfront projects include improvements to a number of sites along the riverfront including, but not limited to the following:

Chene Park  
St. Aubin Park/Marina  
Mt. Elliott Park  
Henderson Marina  
Lakewood East Park  
Riverside Park & Promenade  
Stockton Park  
Garbriel Richard Park  
Uniroyal Site

Work at Mt. Elliott will create an adaptive reuse of the old Lighthouse Storage Depot. Riverside Park is the only riverfront park in southwest Detroit and is used



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extensively by the Community. Its facilities are in need of major renovation to adequately serve that neighborhood. On-going work at Henderson Marina is making that facility more attractive to the tenants. Lakewood East Park is also in need of overall renovation to make it more attractive to the neighborhood and to expand its usage. Shoreline improvements are proposed for Henderson, Stockton and Gabriel Richard Parks and the Uniroyal Site.

### **Belle Isle**

Belle Isle projects include, but are not limited to, the following:

- Canal Rehabilitation & Drainage
- Service Complex Renovation
- Shoreline Improvements
- Bus Stop & Shelter at the Conservatory
- Canoe Shelter
- Flynn Parking lot
- White House improvements
- Golf Course Drainage
- Utility projects
- Rehabilitation of comfort stations
- Beach & Loiterway refectories
- New picnic shelters
- Scott Fountain renovations
- Casino & Conservatory renovations
- Resurfacing at Playscape
- Landscaping
- Trash Receptacle Collection System
- Boat Club Renovation

Renovations to the playscape attraction will enable its full utilization by the public. Comfort station renovations and the addition of new picnic shelters, are necessary to provide the public with adequate facilities and enhance their enjoyment of the park. Picnic shelter replacements are also a necessity to keep Belle Isle as an attractive picnic site. Golf Course and Canal drainage issues will be

addressed and renovations at the Casino and Conservatory will continue.

### **Rouge Park & Valley**

Improvements will continue at the Rouge Valley winter sports area. These renovations will include a toboggan run and warming building, the sledding hill and ice skating area, as well as, an improved children's play area and picnic facilities, landscaping (with a beginning ski hill), and lighting. Trail and bridge construction will allow us to renovate nature, biking and running trails and pedestrian bridges. A continued annual effort is needed to restore picnic facilities and comfort stations to full use. Brennan pool renovations will upgrade the maintenance area to accommodate new equipment, replace filters, and complete bath house spaces.

Projects for the later years covered by this Agenda include development of a new athletic complex with lighted ball diamonds, as well as, football fields and a control building. The design work for the complex has already been completed. Future plans also envision a new westside nature center in the Rouge Valley, to replace the one destroyed by fire. This center will provide an excellent habitat for nature education and study. Funds will also be sought for River Rouge Streambank projects, to support the Eliza Howell and Rouge Park Wildflowers Project, Patton Park pond and Rogell Streambank program.

### **Regional Facilities**

Regional Facilities projects planned for the future include curb and sidewalk replacements and the removal of stone veneer facing for Kennedy Square. At Hart Plaza, the Recreation Department would like to recaulk and point the granite pavers, replace sidewalk and stabilize the pylon foundation. A new fieldhouse would

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enable Recreation to host a variety of indoor athletic activities that cannot be held at any other facility. Construction of a 50-meter Natatorium would enable the City to host a major swimming competition. Funding for all of these facilities is currently undetermined.

### **Land Acquisition-Scattered Sites**

Land Acquisition for scattered sites would enable the Department to expand or link existing recreation sites and to acquire a limited number of new sites in those neighborhoods currently lacking adequate recreational facilities. Funding for this land acquisition is undetermined.

### **INTERDEPARTMENTAL CAPITAL RELATIONSHIPS**

The primary City agencies which impact the Recreation Department's Capital program are those who monitor and administer contracts on our behalf or those who provide utility service to our facilities.

The City Engineering Department and the Detroit Building Authority usually provide construction site inspection and construction contract administration. City Engineer's also provides land surveys to us that are a preliminary service to Capital development projects. Both agencies are reimbursed for these services.

Detroit Water and Sewerage Department provides water and sewer service to our facilities. In addition, the department provided design services for the Belle Isle Water Mains Project.

The Public Lighting Department (PLD) provides power to all of our facilities. PLD also does some electrical and outdoor lighting updates and renovations.

Occasionally, the Planning and Development Department acquires

property for the Recreation Department, as well as, sell any property that is declared surplus.

Redevelopment of Grand Circus Park is a collaborative effort of the Recreation Department and various City Departments, such as, the Department of Public Works, Public Lighting, Transportation, and the Municipal Parking Departments. Also involved in this effort is the Downtown Development Authority (DDA) and the Detroit Building Authority, who is the project manager for the project.

### **GOALS FOR CAPITAL PROGRAM**

1. Promote a safe community by the expanded development and maintenance of the urban forest, parks, and recreation facilities and programs. Renovate and improve recreation centers, neighborhood parks, playfields and related support facilities.
2. Develop and improve larger facilities that attract regional participation: Belle Isle, Hart Plaza, the Detroit Riverfront and Rouge Park.
3. Continue to improve, increase, and maintain landscaping, trees and plantings in neighborhood parks, curb strips, boulevards and other public spaces.
4. Use the capital program to increase the variety of recreational opportunities available to Detroit residents by improving the appearance and usage of department buildings, facilities and properties; and through renovation, reduce the overall maintenance and operating costs of parks, buildings, and facilities.

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### **RATIONALE FOR CAPITAL PROGRAM**

The Capital program is designed to increase the variety of recreational opportunities available to Detroit residents; improve the appearance and usage of department buildings, facilities and property; and reduce the overall maintenance and operating costs of parks, buildings, facilities and recreation programming.

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### **NEIGHBORHOOD BUILDINGS**

Renovations and alterations of existing buildings and landscaping for completed buildings are primary considerations. Also, there is a need for additional quality building space including gymnasiums, rooms for arts and crafts, boxing, social activities, table games and support space required to provide locker and shower rooms, restrooms, kitchens, offices, storage, and heating and ventilation. Whenever possible, local funds will be used in conjunction with State grant funds or other complementary grant funds.

#### **Building Rehabilitation**

These funds will be used for a variety of projects at recreation centers, comfort stations, and other department facilities and will generally include:

- (1) Continued renovation of facilities that have reached a critical stage requiring major repair/renovation or removal from service,
- (2) Removal of architectural barriers which currently prevent use of facilities by the physically challenged, frail and/or elderly persons,
- (3) Roofs repair or replacement,
- (4) Renovation of heating, ventilating, air-conditioning, electrical and plumbing systems. Proposed sites and action include continuing overhaul at Kronk Center, redesign and remedial actions directed at correcting chronic roof problems at Young Center, provision of handicapped pool lifts at all departmental swimming pools, heating of outdoor pools, overall rehabilitation of the comfort station and general building rehabilitation. Other rehabilitation activities are proposed for Farwell, O'Shea, Cannon, Patton and the Re-Cap Projects.

|         |               |                          |
|---------|---------------|--------------------------|
| 2001-02 | \$ 2,000,000  | General Obligation Bonds |
| 2002-03 | \$ 2,000,000  | General Obligation Bonds |
| 2003-04 | \$ 2,000,000  | General Obligation Bonds |
| 2004-05 | \$ 1,000,000  | General Obligation Bonds |
| 2005-06 | \$ 1,000,000  | General Obligation Bonds |
|         | \$ 53,480,000 | Unprogrammed             |

#### **Recreation Camp**

The Recreation Department desires to restore the recreation camp at Brighton, Michigan to year round usage. The Camp Master Plan and Phase I Renovation Study was completed in May, 1996. The study indicated that several cabins were extremely deteriorated while others were in need of general refurbishing. Replacement and renovation work on the cabins has commenced. Lake and waterfront improvements are also needed. Proposed new activities include a new fishing pier, new campfire circles, renovation to Recreation Hall, Kitchen, Shower Facility and Dining Hall. Additional cabin furnishings and new drives and walkways are also proposed for the Camp.

|         |              |                          |
|---------|--------------|--------------------------|
| 2001-02 | \$ 500,000   | General Obligation Bonds |
| 2002-03 | \$ 500,000   | General Obligation Bonds |
| 2003-04 | \$ 500,000   | General Obligation Bonds |
| 2004-05 | \$ 500,000   | General Obligation Bonds |
| 2005-06 | \$ 500,000   | General Obligation Bonds |
|         | \$ 2,050,000 | Unprogrammed             |

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### Security Improvements

It is necessary to protect department facilities and reduce theft and vandalism at department properties. Funds will be used for the purchase and installation of complete alarm systems, security lighting around buildings and parking lots, improvements to roofs, doors, and windows to reduce the possibility of illegal or unauthorized entry, new locking systems and other improvements. Funds expended for this purpose will reduce the need for guard service and for replacement of materials stolen and structures damaged or destroyed through criminal acts. Recent building rehabilitation and construction will be jeopardized without such additional investment.

|         |            |                          |
|---------|------------|--------------------------|
| 2001-02 | \$ 100,000 | General Obligation Bonds |
| 2002-03 | \$ 100,000 | General Obligation Bonds |
| 2003-04 | \$ 100,000 | General Obligation Bonds |
| 2004-05 | \$ 100,000 | General Obligation Bonds |
| 2005-06 | \$ 100,000 | General Obligation Bonds |
|         | \$ 300,000 | Unprogrammed             |

### Support Facility Improvements

Offices and meeting rooms for staff, as well as, adequate storage and garage space for equipment is needed. Necessary improvements include replacement of heating and lighting systems, roofs, and fencing. Landscaping and, in some buildings, installation of air conditioning, as well as bringing buildings to ADA compliance standards. Activities are proposed for Huber, Palmer Park, Rouge, Chandler Park and the District offices.

|         |               |                          |
|---------|---------------|--------------------------|
| 2001-02 | \$ 300,000    | General Obligation Bonds |
| 2002-03 | \$ 400,000    | General Obligation Bonds |
| 2003-04 | \$ 500,000    | General Obligation Bonds |
| 2004-05 | \$ 500,000    | General Obligation Bonds |
| 2005-06 | \$ 500,000    | General Obligation Bonds |
|         | \$ 13,780,000 | Unprogrammed             |

### Support Services

Funding for assessments of property, roofing, architectural, mechanical and electrical systems.

|              |              |
|--------------|--------------|
| \$ 5,670,000 | Unprogrammed |
|--------------|--------------|

### Jefferson-Chalmers Center

This facility will function as a community and recreation center for the neighborhood located within the area bounded by Mack and Conner, Alter Road, and Jefferson Avenue. The neighborhood, previously occupied by deteriorated housing and an elementary school, is the proposed site for a new center that will become an anchor and focal point for a new shopping center, new housing developments and related commercial and economic expansion.

This new center will incorporate the functions and the constituency of the current Maheras Community Center and constitute an improvement regarding the availability of a broader range of recreation activities to the community, such as: indoor swimming, racquetball, tennis, baseball, football, basketball, meeting rooms, day-care accommodations, lounge, and office space.

## RECREATION

The department had intended to expand the Maheras Center when funds became available, with an important element of that expansion being the enclosure of the swimming pool. Recently, the Jefferson/Chalmers Citizens District Council (CDC) received a grant from the State of Michigan for the development of an architectural design for a community recreation center which would serve a considerably larger segment of the far east side community.

\$ 5,250,000

Unprogrammed

### **Heilmann Recreation Center**

Heilmann is one of the more heavily utilized facilities in an under-serviced area of Detroit. The building was built as the first of a multi-phased structure that has never been completed.

Funds are requested for the remaining phases of the building to provide a gymnasium, senior citizens area, and other recreational spaces.

\$ 800,000

Unprogrammed

### **Major Centers**

Closed recreation centers will need capital renovation in order to reopen. Other facility rehabilitation is needed in order to adequately serve the surrounding community.

\$ 5,000,000

Unprogrammed

### **New Westside Center**

A major new center is needed in the area around the Southfield/Grand River interchange to serve an area with a growing child/young adult population. This growth is projected to continue for at least the next ten years. The nearest facilities are already heavily utilized by their neighborhood populations and are too distant to service this area.

\$ 6,000,000

Unprogrammed

## **NEIGHBORHOOD PARKS AND LANDSCAPES**

General park development needs include improving the usage and appearance of existing parks, playfields, tot lots, play lots and playgrounds; visual enhancements including tree planting on parks and boulevards; rehabilitating hard surface areas ( i.e., tennis and basketball courts), walkways and parking areas; sports lighting improvements and response to citizen requests for specific site improvements.

### **Park Development**

Continued funding is requested for the construction and rehabilitation of neighborhood parks, playfields, tot-lots and playgrounds by City forces. These locations provide general recreation for children and adults forming the basis of our service to the community. Ongoing improvements and renovations are required on heavily used land and for the replacement of trees and play/picnic equipment located at 391 recreation sites distributed throughout Detroit. Funds will also be used for construction of new playgrounds in neighborhoods without adequate facilities and for demolition of smaller, obsolete or surplus structures.

2001-02 \$ 2,000,000

General Obligation Bonds

2002-03 \$ 2,000,000

General Obligation Bonds

## RECREATION

|         |               |                          |
|---------|---------------|--------------------------|
| 2003-04 | \$ 2,000,000  | General Obligation Bonds |
| 2004-05 | \$ 2,000,000  | General Obligation Bonds |
| 2005-06 | \$ 2,000,000  | General Obligation Bonds |
|         | \$ 45,000,000 | Unprogrammed             |

### Major Parks Redevelopment

This request will provide needed funds for larger rehabilitation projects that cannot be accomplished through the Park Development Unit. The Recreation Department will also use these funds as the cash match for State grants including the Michigan Natural Resources Trust Fund that enables the Department to continue to use grant funding to assist with overall redevelopment of sites such as Farwell and Manz Playfields (EZ). These funds would enable the Department to improve play apparatus accessibility and safety at various recreation sites, to target specific sites like Belle Isle, Rouge, Chandler (EZ) and Patton Parks for facility upgrades, renovations and improvements, to develop new facilities such as walking paths within larger parks or a running track at Bishop Playfield.

|         |               |                          |
|---------|---------------|--------------------------|
| 2001-02 | \$ 1,000,000  | General Obligation Bonds |
|         | \$ 500,000    | State Funds              |
| 2002-03 | \$ 500,000    | General Obligation Bonds |
|         | \$ 500,000    | State Funds              |
| 2003-04 | \$ 500,000    | General Obligation Bonds |
|         | \$ 500,000    | State Funds              |
| 2004-05 | \$ 500,000    | General Obligation Bonds |
|         | \$ 500,000    | State Funds              |
| 2005-06 | \$ 500,000    | State Funds              |
|         | \$ 15,470,000 | Unprogrammed             |

### Sports Lighting

Obsolete incandescent baseball diamond lighting fixtures should be replaced or repaired. Also, new or recently renovated outdoor recreation facilities should be lighted to extend usage time and allow for more participation.

|         |              |                          |
|---------|--------------|--------------------------|
| 2004-05 | \$ 350,000   | General Obligation Bonds |
|         | \$ 1,000,000 | Unprogrammed             |

### Boulevards and Parks-Tree Planting

A variety of healthy trees improve the appearance of City-owned property and public spaces. Trees lost to storms and Dutch Elm Disease must be replaced. Funds within this category may also be used as partial match for ISTEA Boulevard Enhancement Grants.

|         |              |                          |
|---------|--------------|--------------------------|
| 2003-04 | \$ 350,000   | General Obligation Bonds |
| 2004-05 | \$ 250,000   | General Obligation Bonds |
| 2005-06 | \$ 250,000   | General Obligation Bonds |
|         | \$ 1,000,000 | Unprogrammed             |

### Rogell Golf Course

Funds will be used to make improvements to the course tees, greens and cart paths, as well as to the irrigation system. The project will also include new clubhouse design work and construction.

## RECREATION

|         |              |                          |
|---------|--------------|--------------------------|
| 2001-02 | \$ 500,000   | General Obligation Bonds |
| 2002-03 | \$ 500,000   | General Obligation Bonds |
| 2003-04 | \$ 500,000   | General Obligation Bonds |
| 2004-05 | \$ 500,000   | General Obligation Bonds |
| 2005-06 | \$ 500,000   | General Obligation Bonds |
|         | \$ 8,170,000 | Unprogrammed             |

### Hard Surface Areas

Ongoing improvements are needed for hard surface areas, such as tennis courts, parking lots, basketball courts, and sidewalks. These include renovations and alterations of existing courts and parking lots; as well as, limited construction of new areas where needed.

|         |              |                          |
|---------|--------------|--------------------------|
| 2001-02 | \$ 500,000   | General Obligation Bonds |
| 2003-04 | \$ 500,000   | General Obligation Bonds |
| 2004-05 | \$ 500,000   | General Obligation Bonds |
| 2005-06 | \$ 500,000   | General Obligation Bonds |
|         | \$ 3,680,000 | Unprogrammed             |

### McCabe Field House Parking Lot

Construction of a new parking lot at this site.

|              |              |
|--------------|--------------|
| \$ 1,120,000 | Unprogrammed |
|--------------|--------------|

### Street Tree Planting

Replacement of trees destroyed by Dutch Elm Disease and forces of Nature enhances the appearance of residential areas, increases the value of homes and improves the quality of life in Detroit.

|         |            |                          |
|---------|------------|--------------------------|
| 2001-02 | \$ 100,000 | General Obligation Bonds |
| 2002-03 | \$ 100,000 | General Obligation Bonds |
| 2003-04 | \$ 100,000 | General Obligation Bonds |
| 2004-05 | \$ 100,000 | General Obligation Bonds |
| 2005-06 | \$ 100,000 | General Obligation Bonds |
|         | \$ 100,000 | Unprogrammed             |

### Support Services

Services included are survey and engineering, geotechnical, property map file information system and historical conservation.

|         |            |                          |
|---------|------------|--------------------------|
| 2003-04 | \$ 300,000 | General Obligation Bonds |
| 2004-05 | \$ 200,000 | General Obligation Bonds |
| 2005-06 | \$ 200,000 | General Obligation Bonds |
|         | \$ 625,000 | Unprogrammed             |



## RECREATION

### **Over-The-Expressway-Parks**

Two parks would be constructed on freeway pedestrian bridges—one over U.S. 10, the other over I-375. The former would link the Jeffries Homes and the Wigle Recreation Center. The latter would connect the Eastern Market to the Gratiot Central Market. Pedestrian traffic would be increased by the presence of attractive parks with seating and other park amenities.

\$ 1,000,000

Unprogrammed

## **RIVERFRONT**

### **Riverfront Parks**

Expanding use of the entire Detroit riverfront requires funding for improvements at a variety of sites along the 10.3 mile river's edge. All the projects listed closely relate to other developments, such as, housing, commercial, private and recreational, as well as creating a better public recreational atmosphere along our most important natural resource. Projects include marina improvements, renovation of Riverside Park and Mt. Elliott Park- building renovations. Also, significant shoreline erosion has taken place at a number of riverfront parks and requires rehabilitation to existing sea walls or construction of new ones. Funds are requested for the former Lighthouse Storage Depot at Mt. Elliott Park and for Chene Park, Lakewood East and the Riverside Park and Promenade.

|         |              |                          |
|---------|--------------|--------------------------|
| 2001-02 | \$ 1,000,000 | General Obligation Bonds |
| 2002-03 | \$ 1,000,000 | General Obligation Bonds |
| 2003-04 | \$ 1,000,000 | General Obligation Bonds |
| 2004-05 | \$ 1,000,000 | General Obligation Bonds |
| 2005-06 | \$ 1,000,000 | General Obligation Bonds |
|         | \$ 2,250,000 | Unprogrammed             |

### **Marina Improvements**

The west retaining wall of Henderson Marina is showing signs of deterioration and erosion deep under its structure. This is one of several problems (water supply, access drives, parking lots, etc.) that the department wishes to correct.

\$ 2,000,000

Unprogrammed

### **Shoreline Stabilization And Fishing Access**

There is an increased need for park shoreline stabilization, recreation property protection from erosion and fishing bulkhead construction. The shorelines at both east side and west side parks show increasing and marked deterioration which requires treatment. Other sites include Henderson, Stockton and Gabriel Richard parks and the Uniroyal site.

\$ 7,300,000

Unprogrammed

## **BELLE ISLE**

The proposed projects represent the continued development and improvement of Belle Isle as a total regional recreational park. These projects include utility infrastructure improvements, overall island landscaping, comfort station replacement, canal restoration, parking lot and road resurfacing, playground equipment installation and other recreational improvements.

## RECREATION

### Facility Renovation

Continued pressure on the facilities of this heavily used park necessitate extensive renovation and rehabilitation of comfort stations, picnic shelters, play apparatus and other public facilities. Funds are requested for comfort station renovation and picnic shelter replacements and for playscapes. The golf course needs irrigation and drainage. Renovation of the green house and the boat club are also needed. A new master-plan for Belle Isle has been developed and it provides direction for future of Belle Isle Park development. Activities include continued renovation of the Conservatory, Scott Fountain, Casino and Canoe Shelter/Flynn Pavillion.

|         |               |                          |
|---------|---------------|--------------------------|
| 2001-02 | \$ 1,000,000  | General Obligation Bonds |
| 2002-03 | \$ 1,000,000  | General Obligation Bonds |
| 2003-04 | \$ 1,000,000  | General Obligation Bonds |
| 2004-05 | \$ 1,000,000  | General Obligation Bonds |
| 2005-06 | \$ 1,000,000  | General Obligation Bonds |
|         | \$ 39,075,000 | Unprogrammed             |

### Landscape Improvements

Funds are requested for necessary site work at various locations throughout the island. This includes ongoing work required on roads, parking aprons, walks and pathways, general landscaping around buildings and trails, improvements to the canals and lagoons and general shoreline improvements.

|         |               |                          |
|---------|---------------|--------------------------|
| 2002-03 | \$ 500,000    | General Obligation Bonds |
| 2003-04 | \$ 500,000    | General Obligation Bonds |
| 2004-05 | \$ 500,000    | General Obligation Bonds |
| 2005-06 | \$ 500,000    | General Obligation Bonds |
|         | \$ 19,975,000 | Unprogrammed             |

### Utility Rehabilitation/Infrastructure Improvements

Old and inadequate water lines are continually breaking down causing extensive water damage to land, trees, and buildings. Funds are requested for the replacement and installation of new water lines in the areas of greatest need over a five-year period. Funds are also requested for the continued renovation of drainage in areas subject to natural, as well as, water-line related flooding. Other significant Belle Isle utility projects include conversion to natural gas, road, bridge, lighting, power and other infrastructure improvements.

|         |               |                          |
|---------|---------------|--------------------------|
| 2003-04 | \$ 500,000    | General Obligation Bonds |
| 2004-05 | \$ 500,000    | General Obligation Bonds |
| 2005-06 | \$ 500,000    | General Obligation Bonds |
|         | \$ 16,600,000 | Unprogrammed             |

## ROUGE PARK AND ROUGE VALLEY

### Rouge Park Winter Sports Area

The Recreation Department hopes to continue developing toboggan runs as part of the process of creating a winter sports area at Rouge Park. The funding request is for the toboggan runs and warming building. The balance of the winter sports area includes continued improvement of the sledding hill and ice skating arena, development of new picnic and children's play areas, lighting and general landscaping improvements.

## RECREATION

|         |              |                          |
|---------|--------------|--------------------------|
| 2003-04 | \$ 300,000   | General Obligation Bonds |
| 2004-05 | \$ 300,000   | General Obligation Bonds |
| 2005-06 | \$ 300,000   | General Obligation Bonds |
|         | \$ 3,400,000 | Unprogrammed             |

### **Trail And Bridge Construction**

These funds will be used to renovate nature, biking, and running trails and to include pedestrian bridges as required.

\$ 3,000,000 Unprogrammed

### **Picnic Area Rehabilitation**

Many picnic areas in Rouge Park require attention. New picnic areas with shelters, tables, grills, and access to drinking water and proper drainage are needed, as are access paths, parking, and landscape improvements.

\$ 2,000,000 Unprogrammed

### **Comfort Stations Rehabilitation**

The 1,180 acre Rouge Park presently has few functioning comfort stations. The other stations were closed due to deterioration of the sewer system. All comfort stations need to be renovated to support general public use and recreation programming at this park.

2005-06 \$ 600,000 General Obligation Bonds

### **Improved Landscaping**

This project is proposed to establish a quality surrounding for the Winter Sports area where the toboggan runs have been upgraded and the facilities are being expanded with a beginner ski hill. The landscaping will significantly enhance the area with trees and decorative plantings around the sports and warming areas. A natural grasslands/prairie could be developed in Rouge Park for use as part of an instructional and environmental education program. Additional landscaping at comfort stations in the park will round out this project.

\$ 2,000,000 Unprogrammed

### **Rouge Park Athletic Complex**

Approximately twenty-seven acres of land in Rouge Park should be developed into a lighted softball/baseball complex with parking for approximately 500 cars. The complex will consist of two (2) softball and two (2) baseball fields, two (2) football fields, a control building and landscaping. The west side of Detroit is in need of such a facility. The design work has been completed. Outside funding will be considered for this project.

\$ 4,000,000 Unprogrammed

## RECREATION

### **Rouge Nature Center**

This request will provide funds for the construction of a replacement nature center for the one destroyed by fire. The Rouge Valley provides an excellent habitat for nature study to serve groups and individuals who now have to travel from Detroit's far west side to the Belle Isle Nature Center.

|              |              |
|--------------|--------------|
| \$ 1,500,000 | Unprogrammed |
|--------------|--------------|

### **Rouge River Streambank Projects**

These funds will be used to support the Eliza Howell and Rouge Parks Wildflowers Project, Patton Park pond and Rogell Streambank projects.

|         |            |                          |
|---------|------------|--------------------------|
| 2005-06 | \$ 100,000 | General Obligation Bonds |
|---------|------------|--------------------------|

### **Brennan Pool Renovations**

This project will upgrade maintenance area to accommodate new equipment, replace pool filters, complete bath house spaces to enable expansion of recreational and aquatic programs.

|         |              |                          |
|---------|--------------|--------------------------|
| 2003-04 | \$ 250,000   | General Obligation Bonds |
| 2004-05 | \$ 250,000   | General Obligation Bonds |
| 2005-06 | \$ 500,000   | General Obligation Bonds |
|         | \$ 1,680,000 | Unprogrammed             |

## **REGIONAL FACILITIES**

### **Field House**

Construction of a new indoor field house to provide a major regional venue for sports such as basketball, track, tennis and other court games.

|              |              |
|--------------|--------------|
| \$ 6,000,000 | Unprogrammed |
|--------------|--------------|

### **Natatorium**

In the past several years, attempts to bring major sports events to Detroit have been specifically hampered by the absence of a 50 meter pool and support facilities.

|              |              |
|--------------|--------------|
| \$ 9,000,000 | Unprogrammed |
|--------------|--------------|

### **Campus Martius/Kennedy Square**

Work includes curb and sidewalk replacement and removal of stone veneer facing.

|         |              |                          |
|---------|--------------|--------------------------|
| 2002-03 | \$ 500,000   | General Obligation Bonds |
|         | \$ 2,000,000 | Unprogrammed             |

### **Hart Plaza Fountain And Pylon**

Recaulk and point granite pavers. Stabilization of foundation and replacement of sidewalk area.

|         |              |                          |
|---------|--------------|--------------------------|
| 2001-02 | \$ 600,000   | General Obligation Bonds |
| 2002-03 | \$ 500,000   | General Obligation Bonds |
|         | \$ 1,400,000 | Unprogrammed             |

## RECREATION

### Eastern Market

|         |            |                          |
|---------|------------|--------------------------|
| 2001-02 | \$ 400,000 | General Obligation Bonds |
| 2002-03 | \$ 400,000 | General Obligation Bonds |
| 2003-04 | \$ 400,000 | General Obligation Bonds |
| 2004-05 | \$ 400,000 | General Obligation Bonds |
| 2005-02 | \$ 400,000 | General Obligation Bonds |

### **LAND ACQUISITION - Scattered Sites**

Funds are requested to take advantage of opportunities to expand existing inadequate recreation sites and to acquire a limited number of new sites in those neighborhoods presently lacking adequate recreational facilities.

|              |              |
|--------------|--------------|
| \$ 1,000,000 | Unprogrammed |
|--------------|--------------|

# RECREATION

(000's OMITTED)

| Projects                              | *              | **               | ***              | Funding Source | Authorized Unissued | (Budget) 2000-01 | ***** 5 Year Capital Plan ***** |         |         |         |         | Unprogrammed |
|---------------------------------------|----------------|------------------|------------------|----------------|---------------------|------------------|---------------------------------|---------|---------|---------|---------|--------------|
|                                       | Project Status | Project Timeline | Impact on Budget |                |                     |                  | 2001-02                         | 2002-03 | 2003-04 | 2004-05 | 2005-06 |              |
| <b><u>NEIGHBORHOOD BUILDINGS:</u></b> |                |                  |                  |                |                     |                  |                                 |         |         |         |         |              |
| Building Rehabilitation               | M              | O                | RF/AS            | G.O.<br>O.S.   | \$14,250            | \$1,450          | \$2,000                         | \$2,000 | \$2,000 | \$1,000 | \$1,000 | \$53,480     |
| Camp Improvements                     | M              | O                | RF/AS            | G.O.           | 2,000               | 650              | 500                             | 500     | 500     | 500     | 500     | 2,050        |
| Security                              | M              | O                | RF/NSI           | G.O.           | 300                 |                  | 100                             | 100     | 100     | 100     | 100     | 300          |
| Support Buildings                     | M              | O                | RF/NSI           | G.O.           | 1,700               |                  | 300                             | 400     | 500     | 500     | 500     | 13,780       |
| Support Services                      | M              | O                | AF/AS            | G.O.           |                     |                  |                                 |         |         |         |         | 5,670        |
| Jefferson-Chalmers Center             | N              | P                | AF/AS            | G.O.           |                     |                  |                                 |         |         |         |         | 5,250        |
| Heilmann Center                       | M              | P                | AF/AS            | G.O.           |                     |                  |                                 |         |         |         |         | 800          |
| Major Centers                         | M              | P                | AF/NSI           | G.O.           |                     |                  |                                 |         |         |         |         | 5,000        |
| New Westside                          | N              | P                | AF/AS            | G.O.           |                     |                  |                                 |         |         |         |         | 6,000        |
| Sub-Total (Page 1)                    |                |                  |                  |                | \$18,250            | \$2,100          | \$2,900                         | \$3,000 | \$3,100 | \$2,100 | \$2,100 | \$92,330     |

## Funding Source Summary (Page 1):

|                             |      |          |         |         |         |         |         |         |          |
|-----------------------------|------|----------|---------|---------|---------|---------|---------|---------|----------|
| General Obligation Bonds    | G.O. | \$18,250 | \$2,100 | \$2,900 | \$3,000 | \$3,100 | \$2,100 | \$2,100 | \$92,330 |
| Other Identified Sources ** | O.S. |          | \$0     | \$0     | \$0     | \$0     | \$0     | \$0     | \$0      |

\* PROJECT STATUS: M=project is maintaining current infrastructure; N=Project will result in new development

\*\* PROJECT TIMELINE: P=project is proposed; O=project is ongoing; U=project is one time and underway

\*\*\* IMPACT ON OPERATING BUDGET: AF=additional funding required; RF=results in reduction of funding; NOI=no operating impact

\*\*\* IMPACT ON STAFFING BUDGET: AS=additional staffing required; RS=results in reduction of staffing; NSI=no staffing impact

# RECREATION

(000's OMITTED)

| Projects                       | *<br>Project<br>Status | **<br>Project<br>Timeline | ***<br>Impact<br>on Budget | Funding<br>Source | Authorized<br>Unissued | (Budget)<br>2000-01 | ***** 5 Year Capital Plan ***** |            |            |            |            | Unprogrammed |
|--------------------------------|------------------------|---------------------------|----------------------------|-------------------|------------------------|---------------------|---------------------------------|------------|------------|------------|------------|--------------|
|                                |                        |                           |                            |                   |                        |                     | 2001-02                         | 2002-03    | 2003-04    | 2004-05    | 2005-06    |              |
| <b>PARKS &amp; LANDSCAPES:</b> |                        |                           |                            |                   |                        |                     |                                 |            |            |            |            |              |
| Park Development               | N                      | O                         | AF/AS                      | G.O.              | \$10,000               | \$2,000             | \$2,000                         | \$2,000    | \$2,000    | \$2,000    | \$2,000    | \$45,000     |
| Major Parks Redevelopment      | M                      | O                         | RF/AS                      | G.O.<br>O.S.      | 3,000                  | 2,200               | 1,000<br>500                    | 500<br>500 | 500<br>500 | 500<br>500 | 500<br>500 | 15,470       |
| Sports Lighting                | M                      | O                         | RF/NSI                     | G.O.              |                        |                     |                                 |            |            | 350        |            | 1,000        |
| Boulevard/Park Trees           | N                      | P                         | AF/AS                      | G.O.              |                        |                     |                                 |            | 350        | 250        | 250        | 1,000        |
| Rogell Golf Course             | M                      | O                         | NOI/NSI                    | G.O.              | 1,500                  |                     | 500                             | 500        | 500        | 500        | 500        | 8,170        |
| Hard Surface                   | M                      | O                         | RF/NSI                     | G.O.              | 1,000                  |                     | 500                             |            | 500        | 500        | 500        | 3,680        |
| McCabe Field House Parking Lot | M                      | P                         | NOI/NSI                    | G.O.              |                        |                     |                                 |            |            |            |            | 1,120        |
| Street Trees                   | N                      | P                         | AF/AS                      | G.O.              | 200                    |                     | 100                             | 100        | 100        | 100        | 100        | 100          |
| Support Services               | M                      | O                         | NOI/NSI                    | G.O.              | 300                    |                     |                                 |            | 300        | 200        | 200        | 625          |
| Over the Expressway Parks      | N                      | P                         | AF/AS                      | G.O.              |                        |                     |                                 |            |            |            |            | 1,000        |
| Sub-Total (Page 2)             |                        |                           |                            |                   | \$16,000               | \$4,200             | \$4,600                         | \$3,600    | \$4,750    | \$4,900    | \$4,550    | \$77,165     |

## Funding Source Summary (Page 2):

|                             |      |          |         |         |         |         |         |         |          |
|-----------------------------|------|----------|---------|---------|---------|---------|---------|---------|----------|
| General Obligation Bonds    | G.O. | \$16,000 | \$4,200 | \$4,100 | \$3,100 | \$4,250 | \$4,400 | \$4,050 | \$77,165 |
| Other Identified Sources ** | O.S. |          | \$0     | \$500   | \$500   | \$500   | \$500   | \$500   | \$0      |

\*\* 'Other Identified Sources' refer to State of Michigan Grants (defined below):

## STATE OF MICHIGAN GRANTS:

- 1) 'State Recreation Bond Program' from which projects capped at \$1,000,000 can be financed by 75% State Funds and matched with 25% local Funds.
- 2) 'State Recreation Trust Fund' from which projects capped at \$500,000 can be financed by 75% State Funds and matched with 25% local Funds.

\* PROJECT STATUS: M=project is maintaining current infrastructure; N=Project will result in new development

\*\* PROJECT TIMELINE: P=project is proposed; O=project is ongoing; U=project is one time and underway

\*\*\* IMPACT ON OPERATING BUDGET: AF=additional funding required; RF=results in reduction of funding; NOI=no operating impact

\*\*\* IMPACT ON STAFFING BUDGET: AS=additional staffing required; RS=results in reduction of staffing; NSI=no staffing impact

## RECREATION

(000's OMITTED)

| Projects                                   | *<br>Project<br>Status | **<br>Project<br>Timeline | ***<br>Impact<br>on Budget |  | Funding<br>Source | Authorized<br>Unissued | (Budget)<br>2000-01 | ***** 5 Year Capital Plan ***** |         |         |         |         | Unprogrammed |
|--|------------------------|---------------------------|----------------------------|--|-------------------|------------------------|---------------------|---------------------------------|---------|---------|---------|---------|--------------|
|  |                        |                           |                            |  |                   |                        |                     | 2001-02                         | 2002-03 | 2003-04 | 2004-05 | 2005-06 |              |
| <b>RIVERFRONT:</b>                         |                        |                           |                            |  |                   |                        |                     |                                 |         |         |         |         |              |
| Riverfront Parks                           | M/N                    | O                         | AF/NSI                     |  | G.O.              | \$2,000                | \$750               | \$1,000                         | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$2,250      |
| Marina                                     | M                      | P                         | AF/NSI                     |  | G.O.              |                        |                     |                                 |         |         |         |         | 2,000        |
| Shoreline Stabilization and Fishing Access | M                      | P                         | RF/NSI                     |  | G.O.              |                        |                     |                                 |         |         |         |         | 7,300        |
| Sub-Total (Page 3)                         |                        |                           |                            |  |                   | \$2,000                | \$750               | \$1,000                         | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$11,550     |
| Funding Source Summary (Page 3):           |                        |                           |                            |  |                   |                        |                     |                                 |         |         |         |         |              |
| General Obligation Bonds                   |                        |                           |                            |  | G.O.              | \$2,000                | \$750               | \$1,000                         | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$11,550     |

\* PROJECT STATUS: M=project is maintaining current infrastructure; N=Project will result in new development

\*\* PROJECT TIMELINE: P=project is proposed; O=project is ongoing; U=project is one time and underway

\*\*\* IMPACT ON OPERATING BUDGET: AF=additional funding required; RF=results in reduction of funding; NOI=no operating impact

\*\*\* IMPACT ON STAFFING BUDGET: AS=additional staffing required; RS=results in reduction of staffing; NSI=no staffing impact



## RECREATION

(000's OMITTED)

| Projects                  | *<br>Project<br>Status | **<br>Project<br>Timeline | ***<br>Impact<br>on Budget | Funding<br>Source | Authorized<br>Unissued | (Budget)<br>2000-01 | ***** 5 Year Capital Plan ***** |         |         |         |         | Unprogrammed |
|---------------------------|------------------------|---------------------------|----------------------------|-------------------|------------------------|---------------------|---------------------------------|---------|---------|---------|---------|--------------|
|                           |                        |                           |                            |                   |                        |                     | 2001-02                         | 2002-03 | 2003-04 | 2004-05 | 2005-06 |              |
| <b><u>BELLE ISLE:</u></b> |                        |                           |                            |                   |                        |                     |                                 |         |         |         |         |              |
| Facility Rehabilitation   | M                      | O                         | AF/AS                      | G.O.              | \$2,500                | \$100               | \$1,000                         | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$39,075     |
| Landscape Improvements    | M                      | O                         | RF/RS                      | G.O.              | 1,000                  |                     |                                 | 500     | 500     | 500     | 500     | 19,975       |
| Utility Rehabilitation    | M                      | O                         | RF/RS                      | G.O.              |                        |                     |                                 |         | 500     | 500     | 500     | 16,600       |
| Sub-Total (Page 4)        |                        |                           |                            |                   | \$3,500                | \$100               | \$1,000                         | \$1,500 | \$2,000 | \$2,000 | \$2,000 | \$75,650     |

Funding Source Summary (Page 4):

|                          |      |         |       |         |         |         |         |         |          |
|--------------------------|------|---------|-------|---------|---------|---------|---------|---------|----------|
| General Obligation Bonds | G.O. | \$3,500 | \$100 | \$1,000 | \$1,500 | \$2,000 | \$2,000 | \$2,000 | \$75,650 |
|--------------------------|------|---------|-------|---------|---------|---------|---------|---------|----------|

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|---------------------------------|------------------------|---------------------------|----------------------------|-------------------|------------------------|---------------------|---------------------------------|---------|---------|---------|---------|--------------|
|                                 |                        |                           |                            |                   |                        |                     | 2001-02                         | 2002-03 | 2003-04 | 2004-05 | 2005-06 |              |
| <b>ROUGE PARK:</b>              |                        |                           |                            |                   |                        |                     |                                 |         |         |         |         |              |
| Winter Sports                   | N                      | P                         | AF/AS                      | G.O.              | \$1,000                |                     |                                 |         | \$300   | \$300   | \$300   | \$3,400      |
| Trail & Bridge                  | M                      | O                         | AF/AS                      | G.O.              |                        |                     |                                 |         |         |         |         | 3,000        |
| Picnic Rehabilitation           | M                      | P                         | RF/NSI                     | G.O.              |                        |                     |                                 |         |         |         |         | 2,000        |
| Comfort Station Rehabilitation  | M                      | O                         | RF/RS                      | G.O.              | 300                    |                     |                                 |         |         |         | 600     |              |
| Landscaping                     | N                      | P                         | NOI/NSI                    | G.O.              |                        |                     |                                 |         |         |         |         | 2,000        |
| Athletic Complex                | N                      | P                         | AF/AS                      | G.O.<br>O.S.      |                        |                     |                                 |         |         |         |         | 3,500<br>500 |
| Nature Center                   | N                      | P                         | AF/AS                      | G.O.              |                        |                     |                                 |         |         |         |         | 1,500        |
| Rouge River Streambank Projects | N                      | P                         | NOI/NSI                    | G.O.              |                        |                     |                                 |         |         |         | 100     |              |
| Brennan Pool Renovations        | M                      | O                         | NOI/NSI                    | G.O.              | 500                    |                     |                                 |         | 250     | 250     | 500     | 1,680        |
| Sub-Total (Page 5)              |                        |                           |                            |                   | \$1,800                | \$0                 | \$0                             | \$0     | \$550   | \$550   | \$1,500 | \$17,580     |

## Funding Source Summary (Page 5):

|                             |      |         |     |     |     |       |       |         |          |
|-----------------------------|------|---------|-----|-----|-----|-------|-------|---------|----------|
| General Obligation Bonds    | G.O. | \$1,800 | \$0 | \$0 | \$0 | \$550 | \$550 | \$1,500 | \$17,080 |
| Other Identified Sources ** | O.S. |         | \$0 | \$0 | \$0 | \$0   | \$0   | \$0     | \$500    |

\*\* 'Other Identified Sources' refer to State of Michigan Grants (defined below):

## STATE OF MICHIGAN GRANTS:

- 1) 'State Recreation Bond Program' from which projects capped at \$1,000,000 can be financed by 75% State Funds and matched with 25% local Funds.
- 2) 'State Recreation Trust Fund' from which projects capped at \$500,000 can be financed by 75% State Funds and matched with 25% local Funds.

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|-------------------------------|------------------------|---------------------------|----------------------------|-------------------|------------------------|---------------------|---------------------------------|---------|---------|---------|---------|--------------|
|                               |                        |                           |                            |                   |                        |                     | 2001-02                         | 2002-03 | 2003-04 | 2004-05 | 2005-06 |              |
| <b>REGIONAL FACILITIES:</b>   |                        |                           |                            |                   |                        |                     |                                 |         |         |         |         |              |
| Fieldhouse                    | N                      | P                         | AF/AS                      | G.O.              |                        |                     |                                 |         |         |         |         | \$6,000      |
| Natatorium                    | N                      | P                         | AF/AS                      | G.O.              |                        |                     |                                 |         |         |         |         | 9,000        |
| Campus Martius/Kennedy Square | M                      | P                         | RF/NSI                     | G.O.              | \$500                  |                     |                                 | \$500   |         |         |         | 2,000        |
| Hart Plaza                    | M                      | P                         | RF/NSI                     | G.O.              | 1,500                  |                     | \$600                           | 500     |         |         |         | 1,400        |
| Eastern Market                | M                      | P                         | NOI/NSI                    | G.O.<br>C.R.      |                        | \$850               | 400                             | 400     | \$400   | \$400   | \$400   |              |
| Sub-Total (Page 6)            |                        |                           |                            |                   | \$2,000                | \$850               | \$1,000                         | \$1,400 | \$400   | \$400   | \$400   | \$18,400     |

## Funding Source Summary (Page 6):

|                          |      |         |       |         |         |       |       |       |          |
|--------------------------|------|---------|-------|---------|---------|-------|-------|-------|----------|
| General Obligation Bonds | G.O. | \$2,000 | \$0   | \$1,000 | \$1,400 | \$400 | \$400 | \$400 | \$18,400 |
| Capital Reinvestment     | C.R. |         | \$850 |         |         |       |       |       |          |

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## RECREATION

(000's OMITTED)

| Projects                 | *<br>Project<br>Status | **<br>Project<br>Timeline | ***<br>Impact<br>on Budget |  | Funding<br>Source | Authorized<br>Unissued | (Budget)<br>2000-01 | ***** 5 Year Capital Plan ***** |         |         |         |         | Unprogrammed |
|--------------------------|------------------------|---------------------------|----------------------------|--|-------------------|------------------------|---------------------|---------------------------------|---------|---------|---------|---------|--------------|
|                          |                        |                           |                            |  |                   |                        |                     | 2001-02                         | 2002-03 | 2003-04 | 2004-05 | 2005-06 |              |
| <b>LAND ACQUISITION:</b> |                        |                           |                            |  |                   |                        |                     |                                 |         |         |         |         |              |
| Scattered Sites          | N                      | P                         | NOI/NSI                    |  | G.O.              |                        |                     |                                 |         |         |         |         | \$1,000      |
| Sub-Total (Page 7)       |                        |                           |                            |  |                   | \$0                    | \$0                 | \$0                             | \$0     | \$0     | \$0     | \$0     | \$1,000      |

Funding Source Summary (Page 7):

|                          |      |     |     |     |     |     |     |     |     |
|--------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| General Obligation Bonds | G.O. | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
|--------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|

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RECREATION

(000's OMITTED)

| Projects | *<br>Project<br>Status | **<br>Project<br>Timeline | ***<br>Impact<br>on Budget | Funding<br>Source | Authorized<br>Unissued | (Budget)<br>2000-01 | ***** 5 Year Capital Plan ***** |         |         |         |         | Unprogrammed |
|----------|------------------------|---------------------------|----------------------------|-------------------|------------------------|---------------------|---------------------------------|---------|---------|---------|---------|--------------|
|          |                        |                           |                            |                   |                        |                     | 2001-02                         | 2002-03 | 2003-04 | 2004-05 | 2005-06 |              |

|              |  |  |  |  |          |         |          |          |          |          |          |           |
|--------------|--|--|--|--|----------|---------|----------|----------|----------|----------|----------|-----------|
| GRAND TOTALS |  |  |  |  | \$43,550 | \$8,000 | \$10,500 | \$10,500 | \$11,800 | \$10,950 | \$11,550 | \$293,675 |
|--------------|--|--|--|--|----------|---------|----------|----------|----------|----------|----------|-----------|

Funding Source Summary (Totals):

|                             |      |          |         |          |          |          |          |          |           |
|-----------------------------|------|----------|---------|----------|----------|----------|----------|----------|-----------|
| General Obligation Bonds    | G.O. | \$43,550 | \$7,150 | \$10,000 | \$10,000 | \$11,300 | \$10,450 | \$11,050 | \$293,175 |
| Other Identified Sources ** | O.S. |          | \$0     | \$500    | \$500    | \$500    | \$500    | \$500    | \$500     |
| Capital Reinvestment        | C.R. |          | \$850   |          |          |          |          |          |           |

\*\* 'Other Identified Sources' refer to State of Michigan Grants (defined below):

STATE OF MICHIGAN GRANTS:

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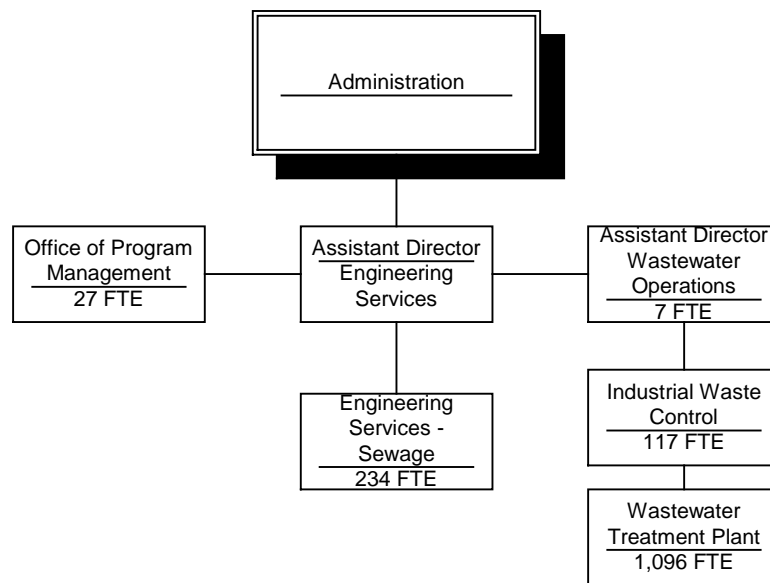
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# SEWERAGE



## SEWERAGE

### **A GENCY MISSION**

The mission of the Water and Sewerage Department is to exceed our customer expectations through the innovative treatment and transmission of water and wastewater and the provision of services that promote healthy communities and economic growth.

#### Sewage Disposal System Goals

To convey and treat the sanitary and combined sewage collected throughout the service area in accordance with applicable service agreements so that the public health is protected and the treated effluent discharged to the Detroit River is in compliance with the limits established by the Department's National Pollution Discharge Elimination System Permit and other applicable laws, rules and regulations imposed by the Federal Court, the U.S. Environmental Protection Agency, Wayne County, Michigan Department of Environmental Quality and the Michigan Department of Public Health regarding wastewater, air pollution and solid waste disposal.

### **CURRENT FACILITIES**

#### Sewage Disposal System (42)

The Detroit Water and Sewerage Department operates one wastewater treatment plant that is located at 9300 W. Jefferson. This plant treats an average flow of 710 mgd while consistently meeting or exceeding permit requirements for effluent quality. The plant produces approximately 800,000 wet tons of wastewater residuals each year which are either incinerated in compliance with applicable air pollution control laws or transported to commercially operated land fills in western Wayne County.

The Wastewater Treatment Plant serves approximately three million people in Detroit and seventy-seven other communities in southeastern Michigan. Approximately 2,900 miles of sewers, including sanitary and combined sewers, combined sewer outfalls, and the Department maintains interceptors with crews operating out of two maintenance yards in the City of Detroit.

The Sewerage System capital plan schedules are presented in the Capital Agenda according to major program categories because individual projects would be too numerous to include separately. The most important projects for each program category are listed later in this document.

### **FIVE YEAR HISTORY**

Except as otherwise noted, revenues of the Sewage Disposal System provided funding for these improvements.

#### Fiscal Year 1999-00

- Southfield Sewer Rehabilitation  
\$18,262,553

This project involved the construction of approximately 3,700 linear feet of 10' diameter bypass sewer tunnel between Warren and Kirkwood Avenues. This bypass sewer tunnel replaced the original sewer located under the Southfield Expressway between Paul Street and Kirkwood Avenue, south of Warren Avenue, which was found to be so distressed during the walk through inspection that it was backfilled and abandoned. Further work included the installation of shotcrete lining through a temporarily braced section of sewer at Dover Avenue and the construction of an equipment access shaft. The existing Southfield Sewer Lining between Schoolcraft Avenue and Joy Road was also patched and an equipment

## SEWERAGE

access/flow control structure was constructed at Plymouth Road.

- Removal, Remediation, and Installation of Underground Storage Tanks \$430,877

This project involved the removal of eight underground storage tanks at Lake Huron Plant, Water Works Park, Springwells, Ford Road Station, Wastewater Treatment Plant, and Southwest Water Plant, with associated site clean-up and required disposal of contaminated soil and preparation of necessary regulatory reports. The work further involved the installation on nine new underground storage tanks with associated appurtenant systems, piping, leak detection, fuel dispensing and control systems. This project was initiated and completed to comply with federal underground storage tank regulations and the State of Michigan Underground Storage Tank Regulatory Act (PA423).

Change orders one and two involved the removal and disposal of 1440 cubic yards of contaminated soil, contaminated water removal and disposal, and asphalt and concrete paving at the sites. It also provided for additional professional environmental services as mandated by the Michigan Department of Natural Resources.

- Centralized Air Compressor Facility – WWTP \$3,956,438

This project involved the construction of a steel building approximately 46' x 53' x 25' high on a pile supported concrete foundation including adjacent exterior sewer and pavement work. Work completed during this project included the installation of four 2 1/2" diameter conduits from the motor starters in the switch house to the central air compressor building totaling 2120 feet. It also included installation of an 18" x 12" Catch Basin in the new concrete pavement, installation of two 6" diameter and 6' long Bollards with 3/4" x 9" x 9" plate welded at

the bottom and filled with concrete to protect the compressors, and installation of 3" gate valves in the existing secondary water line.

Other work included rerouting a 4" PVC drain pipe and two 1/2" copper water supply lines, removal of a 10CB21 beam and installation of a new beam, repairing leaks in two 8" underground Ash lines of the West Ash System in Complex I. The Motor Control Center was relocated from the Electrical Building to the primary influent pumps. Windows were modified by installing corrugated metal siding and new matching face brick to window openings at the West and North walls of the chemical building and the filer building.

- Southfield Sewer Investigation \$3,750,013

This project involved a joint venture of Walbridge Aldinger and NTH Consultants providing all construction management and engineering services necessary to plan, coordinate and execute a comprehensive, walk-through inspection of the entire length of the Southfield sewer and the Hubbell-Southfield outlet sewer. The total sewer footage inspected was approximately 10.5 miles with the vast majority, approximately 8 miles, located directly beneath the Southfield Expressway traffic lanes.

This project was divided into two phases. Phase I, comprised the planning stage where all activities and construction items, which were required to implement the inspection, were determined. Phase II included the preparation of contract documents for the construction of all flow control structures and modifications, and the actual performance of the walk-through inspection.

### Fiscal Year 1998-99

- Computer Assisted Mapping – Suburban-Phase I \$1,052,000



## SEWERAGE

This project involved the conversion of several sections of DWSD from map usage to a Digital Computer Graphics System. The conversion connected features of the system to a skeletal database conforming to the City's effort of standardizing computer platforms, software, and databases, which permitted the sharing of information and the stabilization of efficient satisfactorily working conditions. In addition, Master Meter Drawings, Gate Book sheets, Pressure Reducing Valves, and Wastewater Control Facility drawings were scanned and indexed to preserve information before further deterioration occurred. This Project was financed jointly by the Water Supply System and the Sewage Disposal System.

- Sewer System Improvements for American Axle in Holbrook-Russell to St. Aubin \$72,959

This project involved the replacement of an existing sewer located in Holbrook-Russell to St. Aubin. Replacement included approximately 1,450 linear feet of open cut sewer pipe varying in size from 12 to 32-inches in diameter. It also included all appurtenances and related structures.

- Eastside Customer Service Center \$271,000

This project involved the purchase of land and building at 13297-13301 E. McNichols for use as an East Side Customer Service Center. DWSD previously leased space in the building. The purchase was necessitated when the owner, Detroit Edison, decided to sell the property. The building is a 12,000 square foot one-story structure with brick façade, metal roof overhang and a flat composition deck with a tar and gravel roof. The adjacent parking area accommodates approximately fifty vehicles.

The appropriate DWSD Engineering Section inspected all mechanical and electrical systems. As a result, new HVAC units were

installed. NTH Consultants, Ltd. conducted a Level I environmental assessment and determined that the property contained no environmental problems or concerns. This project was financed jointly by the Water Supply System and the Sewage Disposal System.

- Oakwood Sewage Pumping Station Improvements \$5,911,000

This project involved the rehabilitation of the electrical system, pump motors and accessories, oil removal system, HVAC System and other miscellaneous improvements to the Oakwood Sewage Pumping Station.

The work involved the removal of the existing 4800 volt switchgear and high voltage wiring in the pump motors in the Switch House Switch House and the installation of a new 4800 volt, split bus power distribution system including new circuit breakers and automatic transformer system, new motor starters with controls and wiring, and new 240 volt transformers.

A new motor control center was also installed which included new wiring, a new main control monitoring and alarm panel including instrumentation and wiring. The work also consisted of the installation of two new tube oil skimmers, one transfer pump and connections to the existing 4,000 gallon underground storage tank; the installation of a new duplex pump and piping, site work improvements including a new boiler, three steam fired and two electric unit heaters.

Various structural improvements, including replacing two spiral stairways, architectural improvements to both structures including the roof, office area, toilet, windows, doors, brick work and cleaning concrete and brick masonry surfaces were also completed in this project.

- Renovation of Primary Tanks 3, 4, 5, & 6- \$2,849,000

## SEWERAGE

This project involved removing fourteen main collectors and two cross collectors which consisted of approximately 17,000 linear feet of metal and non-metal collector chain, drive motors, speed reducers, motor starters, disconnect switches, and other components. Work also consisted of cleaning the tanks, preventing flooding, repairing approximately 8,000 linear feet of concrete cracks and repairing approximately four hundred square feet of concrete spall.

The project also involved the contractor furnishing and installing fourteen new main collectors and two cross collectors, painting two hundred fifty linear feet of weir trough; providing, installing and setting anchors and hanging hardware; demolishing the existing building; removing and disposing of asbestos containing materials; furnishing spare parts; commissioning the equipment; and finally, restoring the work site.

- Rouge River Outfall Hydraulic Control & Monitoring Facilities \$4,491,000

This project involved the construction of new Hydraulic Control & Monitoring Facilities in Rouge River Outfall at the Wastewater Treatment Plant. Work consisted of demolition of existing sections of the Rouge River Outfall Conduit, demolition of gates and appurtenance equipment at the site of Movable Dam No. 1 and 2 and demolition of the sampling station. The project also involved the construction of four new roller gates, eight stop log slots, four stop logs and a new sampling station.

Work completed under change orders involved the removal of approximately 4,500 cubic yards - tons of sludge, which was discovered when the top of the Rouge River Outfall Conduit was demolished. The contractor also provided and installed one 480-120 volt 2KVA transformer inside each of three L.T.C. Cabinets with two primary

fuses for each transformer and one secondary circuit breaker (15 Amp) for each connection. Fifty-four bumper posts at the movable dams and the roller gate structure were also installed. A new reinforced concrete wall south of the new Movable Dam No. 2 was constructed. The contractor also had to locate the power cable encased in the roof slab of the outfall and connect it to a new handhole on the South side of the Roller Gate Structure.

- Modification at NI-EA and 7 Mile Relief Sewer Connection \$2,163,000

This project involved the construction of a cast-in-place concrete stop gate and access structure over the existing 12-foot inside diameter NI-EA sewer on Van Dyke at Seven Mile Road, and the design and construction of a temporary support system to facilitate the building of the structure, demolition of a 21-inch concrete reinforced bulkhead in the 17'6" inside diameter NI-EA sewer and the installation of a new removable bulkhead, installation of sewer and instrumentation equipment for a level sensor in an upstream manhole for flow monitoring, traffic control along Van Dyke Avenue during the project, and the repair of a brick eye at the 12'0" inside diameter portion of NI-EA near Mt. Elliot. Work completed under change orders involved the removal of sludge downstream of the existing bulkhead to facilitate a free flow of water and sludge that would have, if not removed, impeded the flow of the upstream sewer, thereby causing sewage build-up.

- Raw Wastewater Pump Station No. 2A \$143,714,000

This project involved the construction of a self-sinking 750-mgd raw wastewater pumping station with seven pumps and space for an eighth. The pumping station was constructed as a circular caisson extending to hardpan with an internal diameter of one hundred twenty-six feet. An

## SEWERAGE

electrical building, a screening building, and eight grit chambers were constructed adjacent to the pump station. The screening building was constructed with seven mechanically cleaned fan screens and space for an eighth. A polymer and ferric chloride chemical storage and feed system, roadways and parking areas, and new ash storage lagoons were also constructed. Junction chambers and tunnels were built to connect the pump station with the existing flow train at the WWTP. The consultant, Metcalf & Eddy provided the engineering and technical services for the project.

Work completed under change orders included the relocation of the line from the trailer to Primary Sedimentation Tank No. 10 in order that sewer service could be provided while tanks No. 8 and 9 were out of service; the installation of support beams for previously installed landing piles for Pump Station 2A; and, additional excavation and concrete underpinning at the Pump Station 2A.

### Fiscal Year 1997-98

- Westside Customer Service Center \$223,500

This project involved the purchase of land and building located at 15600 Grand River, Detroit. The purchase was necessitated when the owner of the previous Westside Customer Service Center, located at 17227 West Seven Mile Road, refused to renew the lease agreement. This Project was financed jointly by the Water Supply System and the Sewage Disposal System.

In order to resume operations quickly and recapture the \$77,000 per week in revenues lost with the closure of the Seven Mile Center, Elgin Builders was commissioned to perform emergency repairs on the building. This included the repair of the roof and the

replacement of two furnaces among other related miscellaneous improvements.

The property consists of three one-story buildings with parking in the rear to accommodate approximately forty cars. In addition to providing customer service for Water and Sewage customers, DWSD intends to offer space to other City Agencies such as Neighborhood City Hall or Mini Police Station to make the center accommodating to the area.

- Screenings and Grit Conveyance Improvements \$2,584,000

This project involved the removal of the existing conveyors and installation of a new conveyor system in the Rack and Grit Building, Screening Building, and Grit Tunnel. It further involved the removal of deteriorated and rusted structural steel and the installation of twenty feet of W 6x9 steel as columns and twenty feet of 4x4 1/4-inch angle irons; replacement of iron pipes with stainless steel; installation of twelve sprayer nozzles and seven wall mounted nozzles; installation of a pneumatic blow off nozzles control station, panel board and signs; installation of a removable railing around the sump pump pit at the foot of the tunnel in Incinerator Complex I and other related miscellaneous work.

### Fiscal Year 1996-97

- Construction Management Services – Pump Repairs \$5,586,000

This project involved providing construction management services for the repairs of specific pumping equipment at the Department's five water treatment plants, twenty unmanned water booster stations and fourteen unmanned sewage pumping stations. The specific pumping equipment mentioned included low-lift and high-lift pumps, line-pumps and reservoir pumps, sanitary storm pumps, associated valves and instrumentation/control apparatus. This

## SEWERAGE

Project was financed jointly by the Water Supply System and the Sewage Disposal System.

- WWTP Maintenance Management System Upgrade \$5,701,000

This project involved providing consulting and technical services in connection with the implementation of an Automated Management System (MMS) for the Wastewater Treatment Plant (WWTP). The software utilized to run the MMS was composed of numerous software modules, which included applications for maintenance management, maintenance planning, preventive maintenance, tool control, event tracking and other related functions. Each software module was integrated into a base Maintenance Planning and Control system so that all of the applications function as an integrated and coordinated whole.

- Ceiling and Wall Renovation-Water Board Building \$134,000

This project involved the purchase and installation of materials (ceiling tiles, cable trays, etc.) to renovate the ceilings and walls on the third, fourth, and seventh through twelfth floors of the Water Board Building. The renovation was done under a Skilled Maintenance Contract. This Project was financed jointly by the Water Supply System and the Sewage Disposal System.

- Insituform Process Lining of Existing Sewers \$5,510,000

This project involved the rehabilitation of selected existing sewers using the construction processes, procedures, methods, and equipment of the patented Insituform process as fixed unit prices. Amendment No. 2 provided technical and professional services for cleaning sewers, lining installation, television inspection prior to and following liner installation. Also included in this project was maintenance of all flows in sewers affected by installation,

the restoration of all sewer connections and site cleanup.

- Automated Maintenance Work Order \$845,000

This project involved providing services for the detailed design and implementation of an automated work order system to improve the Maintenance and Repair Division's ability to meet the needs of its customers. The tasks also included detailed design and development, system acquisition and implementation, training classes, system maintenance, and project administration. This Project was financed jointly by the Water Supply System and the Sewage Disposal System.

### Fiscal Year 1995-96

- Emergency Roof Repair \$176,000

This project involved emergency roof replacement at the Livernois Center Building. The work involved the complete removal of existing roofing and related materials, and installation of a hot-applied multiple-ply new roofing system including insulation base flashing, primary flashing, expansion jointing, and rehabilitation of roof penetrations, roof projections, equipment supports and ventilation housing.

### **PROPOSED FIVE YEAR CAPITAL IMPROVEMENT PLAN**

The capital improvement program for the Sewage Disposal System (SDS) over the next five years, is devoted to replacing, rehabilitating or improving existing process facilities at the Wastewater Treatment Plant; construction or installation of new facilities at the Wastewater Treatment Plant; rehabilitating sewage pumping stations and major sewers; construction of retention basins and other combined sewer overflow (CSO) control measures throughout the combined sewer system; replacement of suburban sewage primary measuring

## SEWERAGE

devices; replacing the Romeo arm interceptor in Garfield Road, replacing or relining deteriorated lateral sewers in the City of Detroit; installing new sewers or rerouting existing sewers to accommodate new development in the Empowerment Zone and throughout the City of Detroit; automating the meter reading function; and upgrading the instrumentation and process control equipment for the Wastewater Treatment Plant and the sewage collection system.

The SDS capital improvement program includes a number of projects to replace, rehabilitate or improve aging facilities. At the Wastewater Treatment Plant, such projects include plant-wide renovation of hydraulic structures, renovation of primary tanks and multiple hearth incinerators, replacement of intermediate lift pumps, return activated sludge pumps and belt filter presses, improvements to final clarifiers, and the purchase and installation of additional belt filter presses. Sewage pumping stations scheduled for rehabilitation or improvement include the Conner Creek, Fox Creek, Fairview, Bluehill and Oakwood Stations. The SDS capital program also includes a program for the relining or replacement of deteriorated lateral sewers in the City of Detroit and the construction or relocation of sewers in areas of the city undergoing redevelopment, such as the Empowerment Zone. The Minergy contract to convert solids to glass aggregate could mitigate some of the costs associated with solids handling.

The SDS capital improvement program includes several large projects for the construction of new facilities at the Wastewater Treatment Plant. These projects are the construction of the Detroit River Outfall No. 1 disinfection facilities, the Detroit River Outfall No. 2, and additional permanent buildings. It also includes the

construction of two new primary clarifiers at the WWTP.

The SDS capital improvement program includes a number of projects mandated by state and federal regulations for the control of combined sewer overflows (CSO). Three large CSO retention basins have already been constructed. The Lieb, St. Aubin and Connor Creek CSO facilities are currently being planned. This category also includes the design and construction of an upper Rouge River tunnel and the Baby Creek Pilot facility. SDS capital program also contains a large provision for Phase II of the CSO program, which is currently being reviewed by the State of Michigan Department of Environmental Quality.

The SDS capital improvement program includes a number of projects to take advantage of technology advances. A project currently underway is the instrumentation, process control and computerization program for the Wastewater Treatment Plant and the sewage collection system. Also planned is the installation and implementation of automatic meter reading systems for the commercial and residential meters, in conjunction with the Water SupplySystem.

### **INTERDEPARTMENTAL CAPITAL RELATIONSHIPS**

Detroit Water and Sewerage Department has no current or proposed capital projects requiring input from other City Agencies at this time.

## SEWERAGE

### **GOALS FOR CAPITAL IMPROVEMENT PROGRAM**

#### Sewer Supply System:

To provide essential, efficient, and user-friendly services by:

- a. Continuing the expansion and improvement of the Wastewater Treatment Plant to provide a cost and energy efficient treatment facility that meets all water and air quality standards.
- b. Continuing to construct facilities for the containment of combined sewer overflows, reducing the number, frequency and magnitude of spills to receiving waters.
- c. Replacing and rehabilitating suburban wholesale customer primary measuring devices to more accurately measure and bill for wastewater treatment service provided.
- d. Continuing to replace those in-city lateral sewers which require an inordinate amount of maintenance or are of insufficient capacity to service customers.
- e. Continuing to construct those interceptor and control facilities needed to adequately service all customers.
- f. Continuing to computerize departmental functions to reduce costs and improve operations.

### **RATIONALE FOR CAPITAL IMPROVEMENT PROGRAM**

City Charter charges the Department with the responsibility of supplying water, sewage disposal and drainage services within and outside of the City of Detroit.

The Department's water treatment, transmission, and distribution facilities and its sewage collection and treatment facilities must be constructed, improved, maintained and replaced in a manner consistent with proper water and sewerage works practices and must meet standards mandated by the Michigan Department of Environmental Quality, Michigan Department of Public Health, and the Environmental Protection Agency. Moreover, the Department must remain capable of meeting its contractual commitments to its customers.

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### Primary Treatment-Wastewater Treatment Plant

Primary Treatment projects include the construction of two new primary clarifiers with three new scum buildings and one sludge pumping station, which is part of the Long Term Combined Sewer Overflow Plan. Other projects involve the renovation of the existing primary treatment facilities which includes renovation of plant hydraulic structures, primary clarifier flow metering improvements, pickle liquor spill containment, and replacement of main lift pumps.

FY 2000-01 Budget- \$106,681,000- Balances, Cash and/or Revenue Bonds

|         |               |                                     |
|---------|---------------|-------------------------------------|
| 2000-01 | \$ 21,038,000 | Balances, Cash and/or Revenue Bonds |
| 2001-02 | \$ 1,619,000  | Balances, Cash and/or Revenue Bonds |
| 2002-03 | \$ 2,055,000  | Balances, Cash and/or Revenue Bonds |

### Secondary Treatment-Wastewater Treatment Plant

Secondary Treatment projects include replacement of two intermediate lift pumps, renovation of two oxygen cryogenic plants, aeration deck A1 and A2 improvements, final clarifier renovations, flow meters for aeration basins No. 1 and 2, repair of step feed gates – aeration basin No. 1 and fine bubble membrane diffusers - aeration tank 2 - bay 3.

FY 2000-01 Budget- \$ 40,336,000- Balances, Cash and/or Revenue Bonds

|         |               |                                     |
|---------|---------------|-------------------------------------|
| 2001-02 | \$ 22,466,000 | Balances, Cash and/or Revenue Bonds |
| 2002-03 | \$ 15,855,000 | Balances, Cash and/or Revenue Bonds |

### Solids Handling-Wastewater Treatment Plant

Solids Handling projects include the purchase and installation of new belt filter presses Complexes I & II, construction of new sludge conveyance system in Complex I, a roof-top material handling system for Complex I & II, a sludge cake feed system for Complex II incinerators, renovation of the multiple hearth incinerator, the replacement of Complex II incinerator induced draft fans and conveyors, the replacement of Complex I & II dry ash lines, ash silo receivers and wet ash booster pumps. The Minergy contract to convert solids to glass aggregate could mitigate some of the costs associated with solids handling.

FY 2000-01 Budget- \$22,366,000- Balances, Cash and/or Revenue Bonds

|         |               |                                     |
|---------|---------------|-------------------------------------|
| 2001-02 | \$65,387,000  | Balances, Cash and/or Revenue Bonds |
| 2002-03 | \$ 63,457,000 | Balances, Cash and/or Revenue Bonds |
| 2003-04 | \$ 16,806,000 | Balances, Cash and/or Revenue Bonds |

### Disinfection-Wastewater Treatment Plant

Projects include the design and construction of chlorination and dechlorination facilities, and the Detroit River Outfall 2.

FY 2000-01 Budget- \$110,609,000- Balances, Cash and/or Revenue Bonds

## SEWERAGE

### General Purpose

General Purpose projects include plant-wide roof repair and replacement, the design, construction, and maintenance of an emergency generator system, a WWTP maintenance management system, wastewater plant improvements, the replacement of CTOS hardware and software system and the rehabilitation of the underground electrical duct bank at the WWTP. Other projects include the removal of hazardous materials and the continuous monitoring of hazardous materials exposure. The most significant project will be the design and installation of updated Wastewater Treatment Plant process control computers and associated field instrumentation.

FY 2000-01 Budget- \$635,920,000- Balances, Cash and/or Revenue Bonds

|         |               |                                     |
|---------|---------------|-------------------------------------|
| 2001-02 | \$ 23,801,000 | Balances, Cash and/or Revenue Bonds |
| 2002-03 | \$ 46,763,000 | Balances, Cash and/or Revenue Bonds |
| 2003-04 | \$ 219,000    | Balances, Cash and/or Revenue Bonds |
| 2004-05 | \$ 225,000    | Balances, Cash and/or Revenue Bonds |

### Sewerage Interceptor System

Projects in this category include rehabilitation of, connection to, and construction of interceptor sewers, which transport sewage to the Wastewater Treatment Plant. The five-year plan includes the construction of the Fifteen-Mile and Hayes Control Facility and the replacement of the Romeo arm interceptor in Garfield Road between Fifteen-Mile and Twenty-one Mile Roads. It also includes the Clinton Township Meter Installation, rehabilitation of suburban sewage master meters and meter pits and rehabilitation of the Oakwood Pumping Station.

FY 2000-01 Budget- \$ 34,657,000- Balances, Cash and/or Revenue Bonds

|         |             |                                     |
|---------|-------------|-------------------------------------|
| 2001-02 | \$5,150,000 | Balances, Cash and/or Revenue Bonds |
|---------|-------------|-------------------------------------|

### Combined Sewer System

Projects related to storage, discharge, and control of combined storm water and sanitary sewage at various locations throughout the collection system include the design and construction of CSO facilities at Lieb, St. Aubin and Connor Creek. Other projects included are the rehabilitation of aging outfall sewers and sewage pump stations and to maximize in-system storage capability to limit the size and frequency of overflows. The construction of the upper Rouge tunnel and the Baby Creek pilot facility, which are both projects in the CSO program, are also high priority projects in this category. Another major project is the design and installation of updated process control computers and associated field instrumentation.

FY 2000-01 Budget- \$298,156,000- Balances, Cash and/or Revenue Bonds

|         |               |                                     |
|---------|---------------|-------------------------------------|
| 2001-02 | \$148,206,000 | Balances, Cash and/or Revenue Bonds |
| 2002-03 | \$ 55,572,000 | Balances, Cash and/or Revenue Bonds |
| 2003-04 | \$616,407,000 | Balances, Cash and/or Revenue Bonds |
| 2004-05 | \$ 77,885,000 | Balances, Cash and/or Revenue Bonds |
| 2005-06 | \$217,537,000 | Balances, Cash and/or Revenue Bonds |



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### Lateral Sewer Replacements

Wastewater is transported via lateral sewers into the sewer interceptor system. Funding allows for the design and replacement of aging lateral sewers at various locations throughout the City of Detroit.

FY 2000-01 Budget- \$ 21,071,000- Balances, Cash and/or Revenue Bonds

|         |               |                                     |
|---------|---------------|-------------------------------------|
| 2001-02 | \$ 20,950,000 | Balances, Cash and/or Revenue Bonds |
| 2002-03 | \$ 64,874,000 | Balances, Cash and/or Revenue Bonds |
| 2003-04 | \$ 17,331,000 | Balances, Cash and/or Revenue Bonds |
| 2004-05 | \$ 16,883,000 | Balances, Cash and/or Revenue Bonds |

### Planning and Administration

Projects related to improved management and administration of the Sewage Disposal System include the development and implementation of a computerized management information system, an 821 MHz Radio Trunking System, department-wide FAMIS replacement with DRMS, a data base management program, an automated meter reader system and an accounting, billing and financial information system. This category also includes projects for department-wide telephone and telecommunications network infrastructure improvements, computer and local area network installation and office relocation.

FY 2000-01 Budget- \$100,365,000- Balances, Cash and/or Revenue Bonds

|         |               |                                     |
|---------|---------------|-------------------------------------|
| 2001-02 | \$ 83,919,000 | Balances, Cash and/or Revenue Bonds |
| 2002-03 | \$ 81,493,000 | Balances, Cash and/or Revenue Bonds |
| 2003-04 | \$ 820,000    | Balances, Cash and/or Revenue Bonds |
| 2004-05 | \$ 844,000    | Balances, Cash and/or Revenue Bonds |

## SEWERAGE

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(000's OMITTED)

| Projects                       | Project<br>Status | Project<br>Timeline | Impact<br>on Budget | Funding<br>Source | Authorized<br>Unissued | (Budget)<br>2000-01 | ***** 5 Year Capital Plan ***** |           |           |          |           | Unprogrammed |
|--------------------------------|-------------------|---------------------|---------------------|-------------------|------------------------|---------------------|---------------------------------|-----------|-----------|----------|-----------|--------------|
|                                |                   |                     |                     |                   |                        |                     | 2001-02                         | 2002-03   | 2003-04   | 2004-05  | 2005-06   |              |
| Primary Treatment (PT)         |                   |                     |                     | R.S.              |                        | \$106,681           | \$21,038                        | \$1,619   | \$2,055   |          |           |              |
| Secondary Treatment (ST)       |                   |                     |                     | R.S.              |                        | 40,336              | 22,466                          | 15,855    |           |          |           |              |
| Solids Handling (SH)           |                   |                     |                     | R.S.              |                        | 22,366              | 65,387                          | 63,457    | 16,806    |          |           |              |
| Disinfection Facilities (D)    |                   |                     |                     | R.S.              |                        | 110,609             |                                 |           |           |          |           |              |
| General Purpose (GP)           |                   |                     |                     | R.S.              |                        | 635,920             | 23,801                          | 46,763    | 219       | \$225    |           |              |
| Sewer Interceptor System (SIS) |                   |                     |                     | R.S.              |                        | 34,657              | 5,150                           |           |           |          |           |              |
| Combined Sewer System (CSS)    |                   |                     |                     | R.S.              |                        | 298,156             | 148,206                         | 55,572    | 616,407   | 77,885   | 217,537   |              |
| Lateral Sewer System (LSR)     |                   |                     |                     | R.S.              |                        | 21,071              | 20,950                          | 64,874    | 17,331    | 16,883   |           |              |
| Planning/Administration (PA)   |                   |                     |                     | R.S.              |                        | 100,365             | 83,919                          | 81,493    | 820       | 844      |           |              |
| TOTALS                         |                   |                     |                     |                   | \$0                    | \$1,370,161         | \$390,917                       | \$329,633 | \$653,638 | \$95,837 | \$217,537 | \$0          |

### Funding Source Summary:

|                   |      |             |           |           |           |          |           |     |
|-------------------|------|-------------|-----------|-----------|-----------|----------|-----------|-----|
| Revenue Supported | R.S. | \$1,370,161 | \$390,917 | \$329,633 | \$653,638 | \$95,837 | \$217,537 | \$0 |
|-------------------|------|-------------|-----------|-----------|-----------|----------|-----------|-----|

Note: see 'high priority projects' in narrative section for `project status, project timeline and impact on budget statements'

\* PROJECT STATUS: M=project is maintaining current infrastructure; N=Project will result in new development

\*\* PROJECT TIMELINE: P=project is proposed; O=project is ongoing; U=project is one time and underway

\*\*\* IMPACT ON OPERATING BUDGET: AF=additional funding required; RF=results in reduction of funding; NOI=no operating impact

\*\*\* IMPACT ON STAFFING BUDGET: AS=additional staffing required; RS=results in reduction of staffing; NSI=no staffing impact

## SEWERAGE

### Summary of Sewage Disposal System Highest Priority Projects

| <b>Project Category</b>  | <b>Projected Cost</b>  |
|--|------------------------|
| <b>Primary Treatment</b> - Wastewater Treatment Plant (PT):<br>Projects involving rehabilitation/renovations of the primary treatment system     | \$131,388,000          |
| <b>Secondary Treatment</b> - Wastewater Treatment Plant (ST):<br>Projects involving rehabilitation/renovations of the secondary treatment system | 78,660,000             |
| <b>Solids Handling</b> - Wastewater Treatment Plant (SH):<br>Includes various expenditures to meet air quality                                   | 168,004,000            |
| <b>Disinfection</b> – Wastewater Treatment Plant (D): projects<br>Involving the disinfection facilities at the Detroit/Rouge River outfalls      | 110,609,000            |
| <b>General Purpose</b> - Wastewater Treatment Plant (GP): includes various design/ construction projects benefiting the entire WWTP process      | 706,859,000            |
| <b>Sewer Interceptor System (SIS):</b> projects relating to the interceptor sewer system   | 36,704,000             |
| <b>Combined Sewer System (CSS):</b> projects relating to the storage/ Discharge/ control of the combined storm and sanitary sewage System        | 1,346,411,000          |
| <b>Lateral Sewer Replacement (LSR):</b> projects relating to the replacement or relining of lateral sewers in the City of Detroit                | 129,748,000            |
| <b>Planning and Administration (PA):</b> projects relating to the improved Management and administration of the Sewage Disposal System           | 157,915,000            |
| <b>Total Sewerage System Projects - Highest Priorities</b>   | <b>\$2,866,298,000</b> |

|  |   |   |        |    |       |      |            |
|--|---|---|--------|----|-------|------|------------|
| Replacement of Main Lift Pumps at Pump Station No. 1   | M | P | RF/NOI | PT | C     | 2002 | 14,111,000 |
| Improvements to Rectangular Primary Clarifier Pipe Gal | M | P | RF/NOI | PT | S/D   | 2002 | 283,000    |
| Improvements to Rectangular Primary Clarifier Pipe Gal | M | P | RF/NOI | PT | C     | 2004 | 2,055,000  |
| Replacement of HVAC, Lighting & Related Equipment      | M | P | RF/NOI | PT | S/D/C | 2002 | 258,000    |
| Replace Primary Electrical Feed for Rectangular Tanks  | M | P | RF/NOI | PT | S/D   | 2001 | 350,000    |
| Replace Primary Electrical Feed for Rectangular Tanks  | M | P | RF/NOI | PT | C     | 2003 | 1,485,000  |
| Rehabilitate Complex B Controls and Sludge Pumping     | M | P | RF/NOI | PT | S/D   | 2001 | 400,000    |
| Rehabilitate Complex B Controls and Sludge Pumping     | M | P | RF/NOI | PT | C     | 2002 | 4,120,000  |
| Replace Weir Gates, Operators & Covers; Rehabilitate C | M | P | RF/NOI | PT | D/C   | 2001 | 2,240,000  |

**Primary Treatment - Subtotal \$ 131,388,000**

|  |   |   |         |    |     |      |              |
|--|---|---|---------|----|-----|------|--------------|
| Purchase & Installation of Two Screened Final Effluent l | N | U | AF/AS   | ST | C   | 2001 | \$ 1,566,000 |
| Secondary Clarifier Improvements                         | M | U | RF/NSI  | ST | C   | 2001 | 30,600,000   |
| Fine Bubble Membrane - Type Oxygen Diffuser in Bay #     | M | U | AF/AS   | ST | D/C | 2001 | 348,000      |
| Determination of the Intermediate Lift Pump Specifcatio  | M | U | NOI/NSI | ST | S/D | 2001 | 829,000      |
| Renovation of Two Oxygen Cryogenic Plants                | M | U | RF/NSI  | ST | S   | 2001 | 34,000       |

|   |   |   |        |    |     |      |               |
|---|---|---|--------|----|-----|------|---------------|
| Replacement of the Variable Frequency Drives (VFDs) for Aeration Basins 1 & 2 | M | U | RF/NSI | ST | C   | 2001 | 4,551,000     |
| Reseal Aeration Decks 3 & 4   | M | P | RF/NOI | ST | D/C | 2001 | 750,000       |
| Improve Secondary Water Pump System in Complex 1                              | M | P | RF/NOI | ST | S/D | 2002 | 88,000        |
| Improve Secondary Water Pump System in Complex 1                              | M | P | RF/NOI | ST | C   | 2003 | 393,000       |
| New Outdoor Control Cabinet and Controls for Aeration Basins 1 & 2            | M | P | RF/NOI | ST | S/D | 2001 | 50,000        |
| New Outdoor Control Cabinet and Controls for Aeration Basins 1 & 2            | M | P | RF/NOI | ST | C   | 2002 | 464,000       |
| Aeration Basin System Improvements - Basins 1, 2, 3 & 4                       | M | P | RF/NOI | ST | D   | 2001 | 1,226,000     |
| Aeration Basin System Improvements - Basins 1, 2, 3 & 4                       | M | P | RF/NOI | ST | C   | 2003 | 15,463,000    |
| Repair of Step Feed Gates - Aeration Basin 1                                  | M | P | RF/NOI | ST | C   | 2001 | 132,000       |
| Replacement of Intermediate Lift Pumps 1 & 2                                  | M | P | RF/NOI | ST | C   | 2002 | 14,617,000    |
| Magnetic Flow Meters for Aeration Basins 1 & 2                                | N | P | AF/NSI | ST | C   | 2002 | 2,149,000     |
| Renovation of Two Oxygen Cryogenic Plants                                     | M | P | RF/NOI | ST | D   | 2001 | 250,000       |
| Renovation of Two Oxygen Cryogenic Plants                                     | M | P | RF/NOI | ST | C   | 2002 | 5,150,000     |
| Secondary Treatment - Subtotal  |   |   |        |    |     |      | \$ 78,660,000 |

|  |   |   |         |    |       |      |    |           |
|--|---|---|---------|----|-------|------|----|-----------|
| Thickener Tank Improvements for Sludge Processing Co     | M | U | RF/NSI  | SH | S/D/C | 2001 | \$ | 1,982,000 |
| Replacement of Complexes 1 & 2 Wet Ash Booster Pum       | M | U | RF/NSI  | SH | D     | 2001 |    | 45,000    |
| Replace Main Stack Bypass Complex 1                      | M | U | RF/NSI  | SH | D     | 2001 |    | 70,000    |
| Replace Main Stack Bypass Dampers - Incineration Corr    | M | U | RF/NSI  | SH | D     | 2001 |    | 45,000    |
| WWTP - Materials Handling System                         | N | U | NOI/NSI | SH | D     | 2001 |    | 84,000    |
| Replace 16 Belt Filter Presses in Lower Level of Sludge  | M | U | RF/NSI  | SH | D     | 2001 |    | 2,721,000 |
| Complex 1& 2Sludge Conveyance System Replacement         | M | U | RF/NSI  | SH | S     | 2001 |    | 550,000   |
| Rehabilitation of Induced Fans for Complex 2 Incinerato  | M | U | RF/NSI  | SH | S     | 2001 |    | 56,000    |
| Purchase, Installation, & Testing of Complexes 1& 2 Bel  | M | U | NOI/NSI | SH | C     | 2001 |    | 1,653,000 |
| Replacement of Centrifuge Equipment                      | M | U | RF/NSI  | SH | S/D   | 2001 |    | 322,000   |
| Replacement of Complexes 1 & 2 Ash Lines and Ash Sil     | M | U | RF/NSI  | SH | S/D   | 2001 |    | 52,000    |
| Dry Ash Handling System - Complexes 1 & 2                | M | U | NOI/NSI | SH | D/C   | 2001 |    | 2,956,000 |
| Replacement of 10 Belt Filter Presses at the Sludge De-v | M | U | RF/NSI  | SH | S/D   | 2001 |    | 1,500,000 |
| Replacement of Opacity Monitors-Incineration Complex     | M | U | RF/NSI  | SH | C     | 2001 |    | 970,000   |
| Boiler No. 3 for Incinerator Complex 1                   | M | U | NOI/NSI | SH | S/D   | 2001 |    | 50,000    |

|  |   |   |         |    |       |      |            |
|--|---|---|---------|----|-------|------|------------|
| Repair Gas Service Lines                               | M | P | RF/NOI  | SH | S     | 2001 | 300,000    |
| Repair Gas Service Lines                               | M | P | RF/NOI  | SH | D/C   | 2002 | 2,724,000  |
| Replacement of Centrifuge Equipment                    | M | P | RF/NOI  | SH | C     | 2003 | 12,698,000 |
| Improve HVAC and Air Treatment for Complex 2           | M | P | RF/NOI  | SH | S/D   | 2001 | 70,000     |
| Improve HVAC and Air Treatment for Complex 2           | M | P | RF/NOI  | SH | C     | 2002 | 520,000    |
| Rebuilding of Belt Filter Presses - Complex 1          | M | P | RF/NOI  | SH | C     | 2004 | 10,927,000 |
| Replace Main Stack Bypass Dampers-Incinerator Compl    | M | P | RF/NOI  | SH | C     | 2001 | 2,935,000  |
| Repair and Expand Screened Final Effluent Supply Syste | M | P | AF/NSI  | SH | D/C   | 2002 | 3,059,000  |
| Replace Main Stack Bypass Dampers-Incinerator Compl    | M | P | RF/NOI  | SH | C     | 2002 | 1,772,000  |
| Sludge Mixing Facility Improvements                    | M | P | RF/NOI  | SH | S/D   | 2002 | 515,000    |
| Sludge Mixing Facility Improvements                    | M | P | RF/NOI  | SH | C     | 2002 | 8,739,000  |
| Solids Master Plan                                     | N | P | NOI/NSI | SH | S     | 2001 | 500,000    |
| Elevators: Incineration Complexes 1& 2, Ash Silo Pump  | N | P | AF/NSI  | SH | S/D   | 2001 | 450,000    |
| Elevators: Incineration Complexes 1 & 2, Ash Silo Pump | N | P | AF/NSI  | SH | C     | 2002 | 4,635,000  |
| Renovate Gas Lines to Incinerators - Gas Trains in Com | M | P | RF/NOI  | SH | S/D/C | 2002 | 1,186,000  |
| Install Cake Pumps in Complexes 1 & 2 for Sludge Conv  | N | P | AF/AS   | SH | S/D   | 2001 | 1,400,000  |



|   |   |   |        |    |       |      |            |
|---|---|---|--------|----|-------|------|------------|
| Install Cake Pumps in Complexes 1 & 2 for Sludge Conv   | N | P | AF/AS  | SH | C     | 2003 | 5,421,000  |
| Rehabilitate Thickener-Complex A                        | M | P | RF/NOI | SH | S/D   | 2001 | 500,000    |
| Rehabilitate Thickener-Complex A                        | M | P | RF/NOI | SH | C     | 2002 | 10,300,000 |
| Replacement of Complex 1 Ventilation System             | M | P | RF/NOI | SH | C     | 2002 | 1,648,000  |
| Replacement of 16 Belt Filter Presses on Lower Level of | M | P | RF/NOI | SH | C     | 2003 | 19,512,000 |
| Boiler No. 3 for Incinerator at Complex 1               | M | P | RF/NOI | SH | C     | 2002 | 2,842,000  |
| Repair & Improve Plant Air System                       | M | P | RF/NOI | SH | S/D   | 2001 | 300,000    |
| Repair & Improve Plant Air System                       | M | P | RF/NOI | SH | C     | 2003 | 1,247,000  |
| Renovation of Multiple Hearth Incinerators              | M | P | RF/NOI | SH | C     | 2002 | 9,270,000  |
| Replacement of Complexes 1 & 2 Wet Ash Booster Pum      | M | P | RF/NOI | SH | C     | 2001 | 140,000    |
| Complexes 1& 2 Sludge Conveyance System Replaceme       | M | P | RF/NOI | SH | D     | 2001 | 2,000,000  |
| Complexes 1& 2 Sludge Conveyance System Replaceme       | M | P | RF/NOI | SH | C     | 2003 | 19,168,000 |
| Improve Burner Management Systems for Complexes 1 ;     | M | P | RF/NOI | SH | S/D   | 2002 | 464,000    |
| Improve Burner Management Systems for Complexes 1 ;     | M | P | RF/NOI | SH | C     | 2004 | 4,349,000  |
| Replacement of Complexes 1 and 2 Center Shaft Drives    | M | P | RF/NOI | SH | S/D/C | 2002 | 1,223,000  |
| Improve Complex 2 Incineration Building Drainage Syst   | M | P | RF/NOI | SH | S     | 2001 | 100,000    |

|   |   |   |         |    |       |      |           |
|---|---|---|---------|----|-------|------|-----------|
| Improve Complex 2 Incineration Building Drainage Syst   | M | P | RF/NOI  | SH | D/C   | 2002 | 2,781,000 |
| Complex 1 Incinerator 2, 3, & 4 Scrubber System         | M | P | RF/NOI  | SH | S/D/C | 2002 | 646,000   |
| Rehabilitation of Scum Incinerator Building             | M | P | RF/NOI  | SH | S/D   | 2003 | 106,000   |
| Rehabilitation of Scum Incinerator Building             | M | P | RF/NOI  | SH | C     | 2004 | 1,530,000 |
| Repair & Improve HVAC Controls & Monitoring System      | M | P | RF/NOI  | SH | S/D   | 2001 | 500,000   |
| Repair & Improve HVAC Controls & Monitoring System      | M | P | RF/NOI  | SH | C     | 2003 | 5,305,000 |
| Complex 2 Incinerator Scrubber System                   | M | P | RF/NOI  | SH | S/D/C | 2002 | 1,722,000 |
| Complex 2 Incineration Induced Draft Fans               | M | P | RF/NOI  | SH | D     | 2002 | 618,000   |
| Complex 2 Incineration Induced Draft Fans               | M | P | RF/NOI  | SH | C     | 2002 | 2,266,000 |
| Roof-Top Material Handling System                       | N | P | AF/AS   | SH | C     | 2002 | 3,845,000 |
| Develop Alternatives for Off-loading of Grit & Method c | N | P | NOI/NSI | SH | S/D/C | 2002 | 3,461,000 |
| Modify Grit Removal Cranes, PS 2                        | M | P | RF/NOI  | SH | S     | 2001 | 100,000   |
| Modify Grit Removal Cranes, PS 2                        | M | P | RF/NOI  | SH | D/C   | 2002 | 1,154,000 |

**Solids Handling - Subtotal \$ 168,004,000**

|   |   |   |       |   |   |      |              |
|---|---|---|-------|---|---|------|--------------|
| Detroit River Outfall Disinfection Facilities | N | U | AF/AS | D | D | 2001 | \$ 2,612,000 |
|---|---|---|-------|---|---|------|--------------|

|  |   |   |         |    |     |      |                              |
|--|---|---|---------|----|-----|------|------------------------------|
| Dechlorination System for the Detroit River Outfall    | N | U | AF/AS   | D  | C   | 2001 | 9,633,000                    |
| Detroit River Outfall No. 2                            | N | U | AF/AS   | D  | C   | 2001 | 75,000,000                   |
| New Chlorination Facility at Detroit Marine Terminal   | N | U | AF/AS   | D  | C   | 2001 | 13,500,000                   |
| DMT Warehouse Rehabilitation                           | M | U | RF/NSI  | D  | C   | 2001 | <u>9,864,000</u>             |
| <b>Subtotal - Disinfection</b>                         |   |   |         |    |     |      | <b>\$ <u>110,609,000</u></b> |
| Plant-wide Roof Repair and Replacement                 | M | U | RF/NSI  | GP | C   | 2001 | \$ 1,696,000                 |
| Job Order Contract - Request for Qualifications (1)    | N | U | NOI/NSI | GP | D/C | 2001 | 2,507,000                    |
| Asbestos Abatement Project at DWSD Facilities (1)      | M | U | NOI/NSI | GP | C   | 2001 | 2,058,000                    |
| Replace Existing CTOS Hardware and Software Systems    | M | U | RF/NSI  | GP | C   | 2001 | 2,291,000                    |
| Additional Permanent Buildings - WWTP                  | N | U | AF/AS   | GP | C   | 2001 | 2,315,000                    |
| WWTP Stockroom Consolidation & Relocation              | N | U | NOI/NSI | GP | D   | 2001 | 50,000                       |
| Design/Build/Maintain Contract for Emergency Generator | N | U | AF/AS   | GP | D/C | 2001 | 3,360,000                    |
| Instrumentation, Control, & Computer System Program    | N | U | AF/NSI  | GP | D/C | 2001 | 187,354,000                  |
| Department-wide Pavement Replacement & Repair (1)      | M | U | RF/NSI  | GP | D/C | 2001 | 4,683,000                    |
| As-needed CIP Implementation Assistance and Related    | N | U | NOI/NSI | GP | D   | 2001 | 6,126,000                    |
| As-needed Engineering Services (1)                     | N | U | NOI/NSI | GP | D   | 2001 | 2,830,000                    |

|   |   |   |         |    |       |      |             |
|---|---|---|---------|----|-------|------|-------------|
| Assist (the Mayor) as Special Administrator for the Sewerage Commission | N | U | NOI/NSI | GP | D     | 2001 | 119,000     |
| As-needed Engineering Services (1)                                      | N | U | NOI/NSI | GP | D     | 2001 | 2,842,000   |
| As-needed Engineering Services (1)                                      | N | U | NOI/NSI | GP | D     | 2001 | 2,842,000   |
| Program Management for Wastewater Treatment Plant Repairs               | N | U | NOI/NSI | GP | S/D/C | 2001 | 315,036,000 |
| Monitoring Atmospheric Air Quality at WWTP                              | N | P | NOI/NSI | GP | S     | 2002 | 2,575,000   |
| Reduce/Remove Hazardous Materials                                       | N | P | NOI/NSI | GP | S/D   | 2001 | 400,000     |
| Reduce/Remove Hazardous Materials                                       | N | P | NOI/NSI | GP | C     | 2003 | 3,729,000   |
| Hazardous Materials Exposure Monitoring                                 | N | P | NOI/NSI | GP | S/D   | 2002 | 412,000     |
| Hazardous Materials Exposure Monitoring                                 | N | P | NOI/NSI | GP | C     | 2003 | 4,976,000   |
| Install New Handrails for Rectangular Primary Tanks                     | M | P | RF/NOI  | GP | S/D/C | 2001 | 598,000     |
| Repair Potable Water Supply   | M | P | RF/NOI  | GP | S/D   | 2002 | 773,000     |
| Repair Potable Water Supply   | M | P | RF/NOI  | GP | C     | 2003 | 3,114,000   |
| Comprehensive Utility Study and Master Plan                             | N | P | NOI/NSI | GP | S     | 2001 | 500,000     |
| Comprehensive Utility Study and Master Plan                             | N | P | NOI/NSI | GP | D/C   | 2002 | 2,240,000   |
| Underground Electrical Duct Bank Repair - WWTP                          | M | P | RF/NOI  | GP | S/D/C | 2002 | 4,532,000   |
| As-needed Engineering Services, System Operation and Maintenance        | N | P | NOI/NSI | GP | S/D   | 2002 | 1,545,000   |

|   |   |   |         |    |     |      |           |
|---|---|---|---------|----|-----|------|-----------|
| Steam Piping System Repair and Improvements           | M | P | RF/NOI  | GP | S/D | 2002 | 567,000   |
| Steam Piping System Repair and Improvements           | M | P | RF/NOI  | GP | C   | 2003 | 2,488,000 |
| Intercom System                                       | N | P | AF/NSI  | GP | S/D | 2001 | 35,000    |
| Intercom System                                       | N | P | AF/NSI  | GP | C   | 2002 | 241,000   |
| Expand Women's Locker Room                            | N | P | AF/NSI  | GP | C   | 2001 | 69,000    |
| Secondary Water System Repair and Improvements        | M | P | RF/NOI  | GP | S/D | 2001 | 400,000   |
| Secondary Water System Repair and Improvements        | M | P | RF/NOI  | GP | C   | 2003 | 3,183,000 |
| Concrete Structure Repair                             | M | P | RF/NOI  | GP | S/D | 2001 | 600,000   |
| Concrete Structure Repair                             | M | P | RF/NOI  | GP | C   | 2003 | 2,493,000 |
| Painting of Various Plant Buildings and Equipment     | M | P | RF/NOI  | GP | D/C | 2002 | 2,245,000 |
| Upgrade Electrical Supply                             | M | P | RF/NOI  | GP | S/D | 2001 | 600,000   |
| Upgrade Electrical Supply                             | M | P | RF/NOI  | GP | C   | 2003 | 2,520,000 |
| Facilities As-built Documentation Development and Mai | N | P | NOI/NSI | GP | D/C | 2001 | 550,000   |
| Low Voltage Wiring Contract (1)                       | M | P | RF/NOI  | GP | C   | 2001 | 1,500,000 |
| Replace Parking Structure-WWTP                        | N | P | NOI/NSI | GP | S   | 2001 | 320,000   |
| Replace Parking Structure-WWTP                        | N | P | NOI/NSI | GP | D   | 2002 | 443,000   |

|  |   |   |         |    |     |      |            |
|--|---|---|---------|----|-----|------|------------|
| Replace Parking Structure-WWTP                           | N | P | NOI/NSI | GP | C   | 2003 | 6,100,000  |
| Renovate/Combine Operation's Laboratory Facility at W    | M | P | RF/NOI  | GP | S   | 2001 | 50,000     |
| Renovate/Combine Operation's Laboratory Facility at W    | M | P | RF/NOI  | GP | D   | 2002 | 309,000    |
| Renovate/Combine Operation's Laboratory Facility at W    | M | P | RF/NOI  | GP | C   | 2003 | 3,097,000  |
| Renovation of Old Administration & Ragland Building -    | M | P | RF/NOI  | GP | S/D | 2002 | 1,030,000  |
| Renovation of Old Administration & Ragland Building -    | M | P | RF/NOI  | GP | C   | 2003 | 10,609,000 |
| Maintenance Improvement Services - Facilities and Vehi   | M | P | RF/NOI  | GP | D/C | 2002 | 1,030,000  |
| Analytical Clean Lab Facility and Additional Parking at  | N | P | AF/NSI  | GP | D/C | 2001 | 5,000,000  |
| Improve Plant Security                                   | N | P | NOI/NSI | GP | S/D | 2002 | 309,000    |
| Improve Plant Security                                   | N | P | NOI/NSI | GP | C   | 2003 | 3,183,000  |
| Emergency Roof Repair & Maintenance Project (1)(2)       | M | P | NOI/NSI | GP | C   | 2001 | 1,000,000  |
| Roof and Pavement Asset Management Program and As-       | N | P | NOI/NSI | GP | D   | 2001 | 2,500,000  |
| As Needed Engineering Services for Concrete Testing, C   | N | P | NOI/NSI | GP | D   | 2001 | 3,000,000  |
| Troubleshoot/Replace Plantwide UPS System                | M | P | RF/NOI  | GP | D/C | 2001 | 1,000,000  |
| Develop Electrical Distribution, Wiring and One-line Dia | N | P | NOI/NSI | GP | C   | 2003 | 1,061,000  |
| WWTP Instrumentation Replacement                         | M | P | RF/NOI  | GP | C   | 2001 | 9,176,000  |

|                            |   |   |         |    |   |      |                  |
|----------------------------|---|---|---------|----|---|------|------------------|
| WWTP Facilities Upgrade    | M | P | RF/NOI  | GP | C | 2001 | 64,689,000       |
| WWTP Interim Centrifuges   | N | P | NOI/NSI | GP | C | 2001 | 8,614,000        |
| WWTP Scale House Upgrade   | M | P | RF/NOI  | GP | C | 2002 | 515,000          |
| WWTP Pilot Plant Upgrade   | M | P | RF/NOI  | GP | C | 2002 | 1,123,000        |
| Computer Hardware/Software | N | P | AF/NSI  | GP | C | 2002 | <u>3,707,000</u> |

**General Purpose - Subtotal    \$    706,859,000**

|  |   |   |         |     |   |      |                 |
|--|---|---|---------|-----|---|------|-----------------|
| Sewage Metering - Primary Measuring Device Improven    | M | U | RF/NSI  | SIS | C | 2001 | \$    1,465,000 |
| Primary Measuring Device Improvements Group No. 3      | M | U | RF/NSI  | SIS | C | 2001 | 2,552,000       |
| Suburban Sewage Primary Measuring Devices              | M | U | AF/AS   | SIS | D | 2001 | 626,000         |
| Sewage Metering - Primary Measuring Device Improven    | M | U | RF/NSI  | SIS | C | 2001 | 49,000          |
| Flow Verification Services Metering Device Calibration | M | U | NOI/NSI | SIS | S | 2001 | 834,000         |
| Control Facility - 15 Mile & Hayes                     | N | U | AF/AS   | SIS | D | 2001 | 157,000         |
| Romeo Arm Interceptor in Garfield Road                 | N | U | AF/AS   | SIS | D | 2001 | 692,000         |
| Romeo Arm Interceptor in Garfield Road From 18 Mile ]  | N | U | AF/AS   | SIS | C | 2001 | 22,121,000      |
| Master Sewer Meters - Clinton Township                 | N | U | AF/AS   | SIS | D | 2001 | 13,000          |

|   |   |   |         |     |     |      |                                    |
|---|---|---|---------|-----|-----|------|------------------------------------|
| Department-wide Geotechnical Services III (1)             | N | U | NOI/NSI | SIS | S/D | 2001 | 45,000                             |
| Master Sewer Meters - Clinton Township                    | N | P | AF/NSI  | SIS | C   | 2001 | 1,000,000                          |
| Flow Control and Wastewater Sampling Facility             | N | P | AF/AS   | SIS | C   | 2002 | 3,090,000                          |
| Suburban Master Meter Improvements                        | M | P | RF/NSI  | SIS | D/C | 2002 | 2,060,000                          |
| Clinton Township and City of Fraser Control Facilities: 1 | N | P | AF/AS   | SIS | C   | 2001 | <u>2,000,000</u>                   |
| <b>ewer Interceptor System - Subtotal</b>                 |   |   |         |     |     |      | <b>\$ <u><u>36,704,000</u></u></b> |
| Hubbell/Southfield Combined Sewer Overflow Detention      | N | U | AF/AS   | CSS | C   | 2001 | \$ 1,454,000                       |
| Regulators for Remote Flow Control Structure and Dam      | M | U | RF/NSI  | CSS | C   | 2001 | 1,934,000                          |
| Conner Creek & Fox Creek Stations Rehabilitation          | M | U | RF/NSI  | CSS | C   | 2001 | 32,668,000                         |
| Electrical Feeder Service to Sewage Pumping Facilities    | N | U | NOI/NSI | CSS | S/D | 2001 | 50,000                             |
| Load Transfer of Electric Utility Service from PLD to D   | N | U | NOI/NSI | CSS | C   | 2001 | 3,200,000                          |
| Greater Detroit Regional System Model - Phase III         | N | U | NOI/NSI | CSS | S   | 2001 | 4,978,000                          |
| Assistance with Public Involvement for CSO Planning       | N | U | NOI/NSI | CSS | S   | 2001 | 84,000                             |
| Long Term CSO Control Plan - Phase II                     | N | U | NOI/NSI | CSS | S/D | 2001 | 19,295,000                         |
| Geotechnical Evaluation and Feasibility Study for Rouge   | N | U | NOI/NSI | CSS | S   | 2001 | 125,000                            |



|  |   |   |         |     |     |      |             |
|--|---|---|---------|-----|-----|------|-------------|
| Conner Creek Pilot Facility                              | N | U | AF/AS   | CSS | S/D | 2001 | 7,595,000   |
| Conner Creek CSO Pilot Facility                          | N | U | AF/AS   | CSS | C   | 2001 | 165,000,000 |
| CSO Pilot Facility at Lieb & St. Aubin Outfall           | N | U | AF/AS   | CSS | S/D | 2001 | 2,132,000   |
| Central Service Center-Huber Ave. CCTV Security System   | N | U | NOI/NSI | CSS | C   | 2001 | 247,000     |
| Modifications at Oakwood Sewage Pumping Station          | N | U | NOI/NSI | CSS | S/D | 2001 | 521,000     |
| 8' Diameter Frisbee Sewer Extension                      | N | U | AF/AS   | CSS | C   | 2001 | 10,000      |
| Rebuild Major Electric Power Distribution Equipment (1   | M | U | NOI/NSI | CSS | C   | 2001 | 1,600,000   |
| Wastewater Collection System Improvements - In-system    | N | U | AF/AS   | CSS | C   | 2001 | 80,000      |
| St. Aubin Screening and Disinfection Facility            | N | U | AF/AS   | CSS | C   | 2001 | 16,218,000  |
| Lieb Screening and Disinfection Facility                 | N | U | AF/AS   | CSS | C   | 2001 | 18,564,000  |
| Baby Creek Combined Sewer Outflow Pilot Control Facility | N | U | AF/AS   | CSS | S/D | 2001 | 3,426,000   |
| In-System Storage Device at 30 Designated Locations      | N | U | AF/AS   | CSS | S/D | 2001 | 5,152,000   |
| Wastewater Master Plan                                   | N | U | NOI/NSI | CSS | S   | 2001 | 8,089,000   |
| Additional Pump at Northeast Sewage Pumping Station      | N | U | AF/AS   | CSS | S/D | 2001 | 139,000     |
| Appraisal Services - As-Needed                           | N | U | NOI/NSI | CSS | D   | 2001 | 500,000     |
| Wet Weather Source Reduction Demonstration - LTCSO       | N | P | NOI/NSI | CSS | S   | 2004 | 2,185,000   |

|   |   |   |         |     |     |      |             |
|---|---|---|---------|-----|-----|------|-------------|
| Wet Weather Source Reduction Demonstration - LTCSC                  | N | P | NOI/NSI | CSS | D   | 2005 | 33,878,000  |
| Wet Weather Source Reduction Demonstration - LTCSC                  | N | P | NOI/NSI | CSS | C   | 2006 | 147,900,000 |
| CSO Outfall Repairs - LTCSO Plan                                    | M | P | RF/NSI  | CSS | S/D | 2002 | 618,000     |
| CSO Outfall Repairs - LTCSO Plan                                    | M | P | RF/NSI  | CSS | C   | 2003 | 3,183,000   |
| Additional In-System Storage -LTCSO Plan                            | N | P | AF/AS   | CSS | C   | 2002 | 20,497,000  |
| Sewage Pump Station Rehabilitation - LTCSO Plan                     | M | P | RF/NSI  | CSS | S/D | 2002 | 6,386,000   |
| Sewage Pump Station Rehabilitation - LTCSO Plan                     | M | P | RF/NSI  | CSS | C   | 2005 | 33,990,000  |
| Rouge River CSO Control Plan - Phase 3 - Geotechnical               | N | P | NOI/NSI | CSS | S/D | 2002 | 2,575,000   |
| CSO Control for Oakwood Pumping Station                             | N | P | AF/AS   | CSS | S/D | 2006 | 174,000     |
| CSO Control for Oakwood Pumping Station                             | N | P | AF/AS   | CSS | C   | 2006 | 2,375,000   |
| Phase II of Electronic Security System for Water & Sewer            | N | P | NOI/NSI | CSS | D/C | 2002 | 4,635,000   |
| Modifications at Oakwood Pumping Station                            | N | P | NOI/NSI | CSS | C   | 2003 | 7,426,000   |
| Belle Isle Main Pumping Station and CSO Control Improvements        | N | P | AF/AS   | CSS | S/D | 2002 | 2,112,000   |
| Belle Isle Main Pumping Station and CSO Control Improvements        | N | P | AF/AS   | CSS | C   | 2004 | 2,841,000   |
| Variable Speed Pump Motor Controls at Wastewater Purification Plant | N | P | NOI/NSI | CSS | D/C | 2004 | 4,917,000   |
| Clintondale Pumping Station Improvements                            | M | P | RF/NSI  | CSS | D   | 2002 | 103,000     |

|   |   |   |         |     |     |      |                  |
|---|---|---|---------|-----|-----|------|------------------|
| Clintondale Pumping Station Improvements                | M | P | RF/NSI  | CSS | C   | 2003 | 1,337,000        |
| Additional Pump at Northeast Sewage Pumping Station     | N | P | AF/NSI  | CSS | C   | 2002 | 3,233,000        |
| Real Time Controls                                      | N | P | AF/NSI  | CSS | D   | 2002 | 824,000          |
| Real Time Controls                                      | N | P | AF/NSI  | CSS | C   | 2004 | 2,404,000        |
| Fox Creek Improvement                                   | M | P | RF/NSI  | CSS | D   | 2004 | 1,858,000        |
| Fox Creek Improvement                                   | M | P | RF/NSI  | CSS | C   | 2005 | 8,779,000        |
| Rouge River Partial Tunnel (5)                          | N | P | AF/AS   | CSS | S/D | 2002 | 94,760,000       |
| Rouge River Partial Tunnel (5)                          | N | P | AF/AS   | CSS | C   | 2004 | 601,000,000      |
| Baby Creek CSO Screening and Disinfection Facility      | N | P | AF/AS   | CSS | S/D | 2001 | 1,150,000        |
| Baby Creek CSO Screening and Disinfection Facility      | N | P | AF/AS   | CSS | C   | 2003 | 40,338,000       |
| Atmospheric Deposition of PCB, Mercury, & Cadmium       | N | P | NOI/NSI | CSS | S   | 2001 | 3,800,000        |
| Bluehill Station - Additional Pump                      | N | P | AF/AS   | CSS | C   | 2002 | 3,605,000        |
| Outfall Improvements Allowance (2)                      | M | P | RF/NSI  | CSS | D   | 2001 | 500,000          |
| Outfall Improvements Allowance (2)                      | M | P | RF/NSI  | CSS | C   | 2002 | 4,120,000        |
| Installation of Back-up Generators at Fairview and Wood | N | P | AF/NSI  | CSS | D/C | 2002 | 7,725,000        |
| Rouge River Partial Tunnel Site Development             | N | P | NOI/NSI | CSS | C   | 2003 | <u>2,122,000</u> |

**Combined Sewer System - Subtotal \$ 1,346,411,000**

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|   |   |   |         |     |     |      |              |
|---|---|---|---------|-----|-----|------|--------------|
| Sewer Improvements - Acid Damage                          | M | O | NOI/NSI | LSR | C   | 2001 | \$ 1,331,000 |
| LSR in the Area Located at Eight Mile, Prairie, & at Clai | M | O | NOI/NSI | LSR | C   | 2001 | 2,222,000    |
| Inspection and In-place Re-habilitation of Existing Circu | M | O | NOI/NSI | LSR | D/C | 2001 | 11,577,000   |
| Lateral Sewer Replacement Allowance (2)                   | M | P | RF/NSI  | LSR | D/C | 2001 | 50,000,000   |
| L ateral Sewer Replacement - Oakwood District             | M | P | RF/NSI  | LSR | S/D | 2003 | 318,000      |
| L ateral Sewer Replacement - Oakwood District             | M | P | RF/NSI  | LSR | C   | 2005 | 11,255,000   |
| Inspection and In-place Rehabilitation of Existing Circul | M | P | RF/NSI  | LSR | D/C | 2003 | 53,045,000   |

**Lateral Sewer Replacement - Subtotal \$ 129,748,000**

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|   |   |   |         |    |     |      |              |
|---|---|---|---------|----|-----|------|--------------|
| DRMS-Department-wide FAMIS Replacement (1)        | N | U | AF/NSI  | PA | D/C | 2001 | \$ 8,000,000 |
| Pre-Treatment Program Data Base Management        | N | U | NOI/NSI | PA | S/D | 2001 | 2,968,000    |
| DWSD Information System Management Information Te | N | U | NOI/NSI | PA | D/C | 2001 | 3,038,000    |
| 821 MHz Trunked Radio System (1)                  | N | U | AF/NSI  | PA | S/D | 2001 | 501,000      |

|  |   |   |         |    |     |      |                         |
|--|---|---|---------|----|-----|------|-------------------------|
| City of Detroit Commercial-Industrial Water Meter Repl | M | U | RF/NSI  | PA | D/C | 2001 | 20,000,000              |
| Customer Billing System (1)                            | N | U | NOI/NSI | PA | D/C | 2001 | 2,950,000               |
| Wastewater Operations Group Management Information     | N | U | NOI/NSI | PA | D   | 2001 | 14,500,000              |
| 821 MHz Radio Trunking System Services on an As-nee    | N | P | AF/NSI  | PA | C   | 2003 | 32,570,000              |
| Automatic Meter Reading City of Detroit Residential Cu | N | P | AF/NSI  | PA | D/C | 2002 | 51,500,000              |
| Main Office Building Relocation (1)                    | N | P | AF/NSI  | PA | D/C | 2002 | 21,888,000              |
| <b>Planning &amp; Administration - Subtotal</b>        |   |   |         |    |     |      | <b>\$ 157,915,000</b>   |
| <b>All Categories - Total</b>                          |   |   |         |    |     |      | <b>\$ 2,866,298,000</b> |

### **Legend**

\* Project Status: M = project is maintaining current infrastructure; N = project will result in new development

\*\*Project Time Line: P = project is proposed; O = project is ongoing; U = project is one time only and is underway

\*\*\*Impact on Operating Budget: AF = additional funding required; RF = results in reduction of funding; NO I= no operating impact

\*\*\*Impact on Staffing Budget: AS = additional staffing required; RS = results in reduction of staffing; NSI = no staffing impact

\*\*\*\*Project Phase: S = study; D = design; C = construction

# STREET CAPITAL

## STREET CAPITAL

### **AGENCY MISSION**

Street capital projects are developed to address the long-term infrastructure needs in the city along with a well-defined State and Federal Transportation Program.

The improvements are funded by Gas & Weight Tax, Federal and State Grants, which require local match funded by Gas and Weight Tax receipts.

### **CURRENT FACILITIES**

There are 686 miles of major streets and 1,896 miles of local streets, including appurtenances such as grade separations, traffic control signals and signs, under the City's jurisdiction.

### **FIVE YEAR HISTORY**

524 miles of street were resurfaced during the last five years. This includes 135 miles of streets completed in 1998; which is an all time high. The yearly target is to resurface 100 miles of streets. Of the 524 miles resurfaced, 167 miles were done by DPW crews and the remaining was completed by contractors. 113 miles were done with 81.85% funding from Federal assistance through the Inter-modal Surface Transportation Efficiency Act and the remaining were done with 100% funding from Gas and Weight Tax receipts.

Major resurfacing projects completed during the last five years:

Larned (I-375 to Mt. Elliot)  
Livernois (McNichols to 8-Mile)  
Mt. Elliot (Jefferson to Gratiot)  
Livernois (Fisher to Vernor)  
Hayes (Harper to Kelly)  
St. Aubin (Holbrook to Clay)  
Clark (Vernor to Plumer)  
Charlevoix (Van Duke to Mt. Elliot)  
Kercheval (St. Jean to Mt. Elliot)  
Forest (Mt. Elliot to Gratiot)

Harper (Mt. Elliot to Gratiot)  
Cadillac (Jefferson to Edsel Ford)  
Third (Grand Blvd to Webb)  
Scotten (Warren to Michigan)  
Vinewood (Michigan to Kirby)  
Lafayette (I-375 to Mt. Elliot)  
John R (McNichols to 8 Mile)  
Schoenherr (McNichols to 8 Mile)  
Mack (Springle to Chalmers)  
Kercheval (Conner to Grosse Pointe Park)  
Dexter (Grand River to Clairmont)  
Scotten (Fisher Fwy to Vernor)  
Dickerson (Canfield to Kercheval)  
French Rd (Warren to Mack)  
Vernor (Conner to Alter Rd.)  
Mack (Dequindre to Chrysler)  
Burns (Mack to Edsel Ford)  
Second (Grand Blvd to Webb)  
Miller (Mt. Elliot to Van Dyke)  
Sherwood (Seven Mile to Eight Mile)

Reconstruction work completed during this period includes:

St. Jean (Mack to Warren)  
John R (Hancock to Warren)  
Ackley Ave (Strong to Benham)  
Legrand (Mt. Elliot to Ackley)  
Elmira (alley to Schaefer)  
Chrysler Service Drive (Clay to Caniff)  
Dequindre (St. Aubin to Clay)  
St. Jean (Edlie to Freud)  
Clay (I-75 to St. Aubin)  
St. Aubin (Clay to Denton)  
Marston (Morrow to St. Aubin).

All of the above reconstruction projects were done with 80% funding from Transportation Economic Development Fund, Category A.

One hundred thirty-two (132) traffic signals were modernized during the last five years at a total cost of \$9,429,725. Funding for this project was from Inter-Model Surface Transportation Efficiency Act (ISTEA).

## **STREET CAPITAL**

City has embarked on a highly ambitious program to improve some of the high accident locations in the city in participation with AAA of Michigan Insurance Company (a private corporation). The locations are selected based on the number of crashes and the crash rate at these intersections. Total Estimated Cost of this program is \$3,175,000, of which AAA will pay \$812,000, the State's share from a special appropriation bill (H.B. 5594) is \$1,587,500 and the remaining cost is to be borne by the City. About 60 intersections were selected under this program, which are on Evergreen Corridor, Schaefer Corridor, Wyoming Corridor, Greenfield Corridor, and Seven Mile Corridor. This project is expected to be completed in two (2) years. It will reduce the number the number of crashes and thereby save lives and reduce damage to property.

### **PROPOSED FIVE YEAR CAPITAL PLAN**

The Street Capital Program is an on-going program of improvements to the City's infrastructure of streets and appurtenances such as grade separations traffic control signals and signs. We are proposing a Street Capital Program of \$313.6 million, over the next five years, with funding from gas and weight taxes and various Federal and State transportation grants.

As in the past, the Department plans to pursue an ambitious program of street improvements which involves the resurfacing of major and local streets. Over the next five years, we are proposing projects with an estimated total cost of \$194.6 million for this operation.

The modernization of traffic signals and signing-including pavement markings, is a continuous program aimed at providing more effective/efficient methods of traffic control. Estimated costs for this program is \$47.2 million.

Other programs under the Street Capital program include bridge reconstruction projects -highway and city parks (\$11.8 million) and street construction (\$60.0 million).

### **INTERDEPARTMENTAL CAPITAL RELATIONSHIPS**

The Department requires input from the Public Lighting Department on some street widening and construction projects where existing poles needs to be reposition or where new service is required. Assistance is also required from the Detroit Water and Sewage Department on various street/road construction, widening or resurfacing projects where manhole covers need to be replaced or repositioned.

### **GOALS FOR CAPITAL PROGRAM**

1. To continue reconstruction of arterial street segments which are beyond
2. Rehabilitate and resurface existing streets showing surface distress.
3. To continue the modernization of the arterial traffic signal and signing systems.
4. To eliminate high-hazard locations through safety improvements.

### **RATIONALE FOR CAPITAL PROGRAM**

The safe and efficient movement of pedestrian, non-motorized and motorized traffic will be enhanced by replacement of obsolete, deteriorating and hazardous trafficways and appurtenances.



## STREET CAPITAL

### Street & Curb Improvements

This continuing Program allocates funds for resurfacing streets and improvements of intersections. The intersections selected for improvements – such as widening, adding left turn lanes, etc., are based on the crash data and the number of accidents at these intersections. Resurfacing lasts approximately 10-15 years on major streets and 20 years for local streets. The target is to resurface 100 miles of street a year and the average miles of streets resurfaced in a year is 118 miles (based on actual figures for the last 5 years).

|         |              |                          |
|---------|--------------|--------------------------|
| 2001-02 | \$29,086,000 | Gas and Weight Taxes     |
|         | \$11,433,000 | Other sources            |
|         | \$12,846,000 | Other sources- State TIP |
| 2002-03 | \$25,000,000 | Gas and Weight Taxes     |
|         | \$12,000,000 | Other sources            |
| 2003-04 | \$25,000,000 | Gas and Weight Taxes     |
|         | \$12,000,000 | Other sources            |
| 2004-05 | \$25,000,000 | Gas and Weight Taxes     |
|         | \$12,000,000 | Other sources            |
| 2005-06 | \$25,000,000 | Gas and Weight Taxes     |
|         | \$12,000,000 | Other sources            |

### Traffic Signals and Signing

Programs covered under this project includes Modernization of Traffic Signals, Pavement Marking with long life polyester paint, intersectional pavement marking, markings at railroad crossings, symbols, stop signs, yield signs, street name signs, etc. Traffic Signal Modernization is eligible for 100% Federal Funding through Transportation Equity Act of 21 Century (TEA21). The City has been spending about \$1.5 million every year for the last 5 years from Federal Funding (funds targeted to City from ISTEA & TEA21) for Traffic Signal Modernization. The City has been successful in getting \$4,100,000 from congestion mitigation and air quality funding (CMAQ), for traffic signal modernization, on Seven-Mile and Livernois Corridor, during FY 2000 and 2001. An additional \$1,850,000 is approved for Traffic Signal Modernization on Mack Ave., for FY 2002, from CMAQ funding.

|         |             |                      |
|---------|-------------|----------------------|
| 2001-02 | \$7,000,000 | Gas and Weight Taxes |
|         | \$4,200,000 | Other sources        |
| 2002-03 | \$7,000,000 | Gas and Weight Taxes |
|         | \$2,000,000 | Other sources        |
| 2003-04 | \$7,000,000 | Gas and Weight Taxes |
|         | \$2,000,000 | Other sources        |
| 2004-05 | \$7,000,000 | Gas and Weight Taxes |
|         | \$2,000,000 | Other sources        |
| 2005-06 | \$7,000,000 | Gas and Weight Taxes |
|         | \$2,000,000 | Other sources        |

### Highway Bridges

Reconstruction of highway bridges will be necessary to correct potentially hazardous conditions. Reconstruction /rehabilitation of 44 bridges have been selected by MDOT, over various highways in the City, during the first five years of their (MDOT'S) 2025 Regional

## STREET CAPITAL

Transportation Plan, at an estimated cost of \$76,145,000. However, funds have not been obligated yet for most of these projects.

The city was successful in getting \$1,500,000 for the reconstruction of Jefferson Ave. Bridge over railroad, from the Critical Bridge Funding Program during FY 2000.

|         |             |                          |
|---------|-------------|--------------------------|
| 2001-02 | \$ 500,000  | Gas and Weight Taxes     |
|         | \$6,775,000 | Other sources- State TIP |
| 2002-03 | \$ 500,000  | Gas and Weight Taxes     |
| 2003-04 | \$ 500,000  | Gas and Weight Taxes     |
| 2004-05 | \$ 500,000  | Gas and Weight Taxes     |
| 2005-06 | \$ 500,000  | Gas and Weight Taxes     |

### Bridges-City Parks

Construction has been completed recently on three (3) bridges, Tireman and Spinoza Bridges over Rouge River and Inselruhe Bridge on Belle Isle. The City was successful in getting \$413,250 from Critical Bridge Funding, for the reconstruction of Ashland Bridge over canal, the construction of which will be completed in 2001.

|         |           |                      |
|---------|-----------|----------------------|
| 2001-02 | \$500,000 | Gas and Weight Taxes |
| 2002-03 | \$500,000 | Gas and Weight Taxes |
| 2003-04 | \$500,000 | Gas and Weight Taxes |
| 2004-05 | \$500,000 | Gas and Weight Taxes |
| 2005-06 | \$500,000 | Gas and Weight Taxes |

### Street Construction

Studies are conducted to identify congestion problems on critical routes and widening are proposed when warranted. The specific projects under consideration at this time, for which funds have been approved and identified, are attached in the "Street Construction Plan" (at the end of this section). MDOT has selected four (4) major projects in the first Five Years of their 2025 Regional Transportation Plan, they are as follows (the projects require a local match (ACT 51) OF 12.5% of the remaining amount of Federal Aid):

1. \$123,000,000 For the access improvements around the Ambassador Bridge.
2. \$79,000,000 For the Study connected with the widening of I-94 from I-96 to Conner.
3. \$37,500,000 For the Reconstruction of I-96, at U.S. 24 (Telegraph Rd) easterly to 240' west of E.B. I-96/S.B. M-39 ramp.
4. \$7,055,000 For the reconstruction of M-10 (Lodge Fwy) I-75 to Randolph Street.

Funds have not been encumbered for the above projects.

|         |              |                          |
|---------|--------------|--------------------------|
| 2001-02 | \$ 4,338,000 | Other sources            |
|         | \$55,665,000 | Other sources- State TIP |

## STREET CAPITAL

### STREET CAPITAL STREET CONSTRUCTION PLAN 2000-01 THROUGH 2005-06

|                                    | <u>2000-01</u> | <u>2001-02</u> |
|------------------------------------|----------------|----------------|
| *Dequindre (Canfield to Warren)    |                |                |
| *Warren (Dequindre to Rivard)      |                |                |
| *Russell (Forest to Warren)        | \$3,751,300    |                |
| Conner (Mack to Warren)            | \$2,645,000    |                |
| Freud (Lillibridge to Clairpointe) | \$1,380,000    |                |
| **Bates (Jefferson to Atwater)     |                | \$3,776,025    |
| **Franklin (St. Aubin to Rivard)   |                | \$5,491,689    |
| **Rivard (Franklin to Riverside)   |                | \$2,282,354    |

\* ***80% of the Cost will be reimbursed from TEDF Cat A Funding.***

\*\* ***\$8,000,000 will be reimbursed from TEDF Cat A Funding; these are projects connected with Improvements of Streets around General Motors' Headquarters (Renaissance Center). The total cost of these projects is \$11,550,068; of which \$8,000,000 will be reimbursed by the State from TEDF Cat A Funding – the remaining amount has to be borne by General Motors.***

## STREET CAPITAL

(000's OMITTED)

| Projects                     | *<br>Project<br>Status | **<br>Project<br>Timeline | ***<br>Impact<br>on Budget | Funding<br>Source | Authorized<br>Unissued | (Budget)<br>2000-01 | ***** 5 Year Capital Plan ***** |          |          |          |          | Unprogrammed |
|------------------------------|------------------------|---------------------------|----------------------------|-------------------|------------------------|---------------------|---------------------------------|----------|----------|----------|----------|--------------|
|                              |                        |                           |                            |                   |                        |                     | 2001-02                         | 2002-03  | 2003-04  | 2004-05  | 2005-06  |              |
| Street and Curb Improvements | M                      | O                         | RF/NSI                     | G.W.              |                        | \$28,492            | \$29,086                        | \$25,000 | \$25,000 | \$25,000 | \$25,000 |              |
|                              |                        |                           |                            | O.S.              |                        | 13,245              | 11,433                          | 12,000   | 12,000   | 12,000   | 12,000   |              |
|                              |                        | P                         |                            | O.S.-STIP *       |                        | 11,286              | 12,846                          |          |          |          |          |              |
| Traffic Signals and Signing  | M                      | O                         | RF/NSI                     | G.W.              |                        | 10,050              | 7,000                           | 7,000    | 7,000    | 7,000    | 7,000    |              |
|                              |                        |                           |                            | O.S.              |                        | 6,050               | 4,200                           | 2,000    | 2,000    | 2,000    | 2,000    |              |
| Highway Bridges              | M                      | O                         | RF/NSI                     | G.W.              |                        | 4,070               | 500                             | 500      | 500      | 500      | 500      |              |
|                              |                        | P                         |                            | O.S.              |                        | 1,500               |                                 |          |          |          |          |              |
|                              |                        |                           |                            | O.S.-STIP *       |                        | 18,939              | 6,775                           |          |          |          |          |              |
| Bridges - City Parks         | M                      | O                         | RF/NSI                     | G.W.              |                        | 1,065               | 500                             | 500      | 500      | 500      | 500      |              |
|                              |                        |                           |                            | O.S.              |                        | 413                 |                                 |          |          |          |          |              |
| Street Construction          | M                      | O                         | RF/NSI                     | G.W.              |                        | 3,143               |                                 |          |          |          |          |              |
|                              |                        |                           |                            | O.S.              |                        | 15,386              | 4,338                           |          |          |          |          |              |
|                              |                        |                           |                            | O.S.-STIP *       |                        | 27,100              | 55,665                          |          |          |          |          |              |
| <b>TOTALS</b>                |                        |                           |                            |                   | \$0                    | \$140,739           | \$132,343                       | \$47,000 | \$47,000 | \$47,000 | \$47,000 | \$0          |

### Funding Source Summary:

|                          |      |          |          |          |          |          |          |          |     |
|--------------------------|------|----------|----------|----------|----------|----------|----------|----------|-----|
| Gas and Weight Tax       | G.W. | \$46,820 | \$37,086 | \$33,000 | \$33,000 | \$33,000 | \$33,000 | \$33,000 | \$0 |
| Other Identified Sources | O.S. | \$93,919 | \$95,257 | \$14,000 | \$14,000 | \$14,000 | \$14,000 | \$14,000 | \$0 |

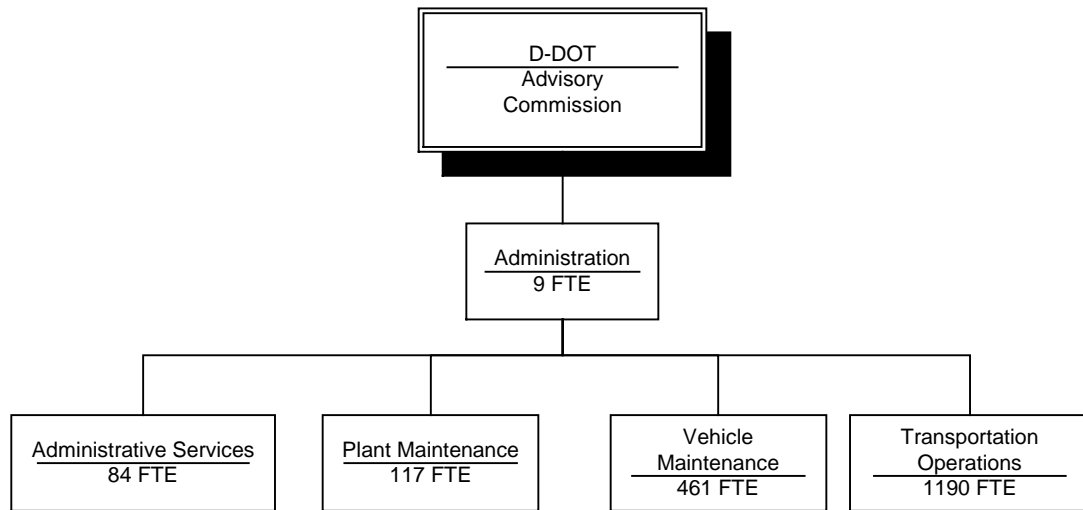
### NOTES:

'Other Identified Sources' include: Federal Highway Funds, Federal Aid Urban System Funds (FAUS), Intermodal Surface Transportation Funds, Transportation Economic Development Funds (TEDF), Railroad Funds and other 'Local Source' shares.  
 \* (STIP) refer to projects in the State's Transportation Improvement Program which are subject to amendment.  
 \* (TEDF) are projects for which applications have been submitted and awaiting approval .

- \* PROJECT STATUS: M=project is maintaining current infrastructure; N=Project will result in new development
- \*\* PROJECT TIMELINE: P=project is proposed; O=project is ongoing; U=project is one time and underway
- \*\*\* IMPACT ON OPERATING BUDGET: AF=additional funding required; RF=results in reduction of funding; NOI=no operating impact
- \*\*\* IMPACT ON STAFFING BUDGET: AS=additional staffing required; RS=results in reduction of staffing; NSI=no staffing impact

Note: RF:'Reduction in Funding' is expected in the Department of Public Works operating budget as a result of completion of listed projects.

# TRANSPORTATION



## TRANSPORTATION

### **A GENCY MISSION**

The mission of the Detroit Department of Transportation (DDOT) is to provide the highest quality public transit service by moving people in a cost effective, safe and user-friendly manner that maintains and attracts residents, businesses and visitors to the city as part of a metro Detroit intermodal transportation system thereby benefiting the City's economic vitality.

### **CURRENT FACILITIES**

D-DOT is the largest transit provider in the State of Michigan, operating over 1,200 miles of routes, and vehicles traveling 23,000,000 miles annually. D-DOT's primary facilities (Central) located at 1301 East Warren, include an administration building, heavy repair facility, plant maintenance building. The Department maintains three other satellite terminals with garages and storage bays for light repairs. They are: Coolidge terminal, located at 14044 Schaefer which also houses the Customer Telephone Information Center, Gilbert terminal and Shoemaker which is a campus of buildings located at 5600 Wabash and 11200 Shoemaker. Facilities used for major bus passenger traffic and layover purposes are Cadillac Square, Capital Park, State Fairgrounds and Northland, Eastland and Fairlane Shopping Centers.

The Department's active fleet consists of 540 fixed-route coaches, which serves 54 bus routes in the City of Detroit. The department maintains approximately 5,000 bus stops and 200 bus shelters. Additionally, the Department operates a light rail antique trolley line which services the Central Business District, and the Department also provides administrative services to the Detroit Transportation Corporation (DTC), operator of the Detroit People Mover.

### **FIVE YEAR HISTORY**

Over the past five years, DDOT has utilized approximately \$108,291,711 in federal and state grant funds to replace and expand 40 ft. Line-Haul coaches and Compressed Natural Gas (CNG) trolleys and service vehicles for road personnel. A new telephone system was installed and computer hardware and software setups implemented throughout DDOT. The Central facility and Coolidge terminal received new roofs. Planning and engineering services were procured for development of conceptual plans for DDOT's major investment projects such as the Timed Transfer Center, and construction of a new downtown intermodal transit center.

Projects that were started during this period but are ongoing include implementation of the Automated Information System used by Scheduling and Customer Telephone Information Center offices, rehabilitation of an existing facility to accommodate a temporary CNG facility.

### **PROPOSED FIVE YEAR CAPITAL PLAN**

DDOT's proposed Five Year Capital Plan is approximately \$270 million in Federal and State grant appropriations with funding sources of 80 percent from the Federal government and 20 percent from the State and/or City.

The Department's five year plan include major investments such as construction of two Timed Transfer Centers with childcare service, construction of a downtown intermodal transit center, construction of a Compressed Natural Gas (CNG) facility to accommodate the existing and planned CNG bus fleet. A Downtown Mobility Management System will be developed to improve traffic flow and travel convenience by

## TRANSPORTATION

coordinating transit service and parking facilities.

DDOT's Capital Plan includes bus service improvements as one hundred-six (106) age-eligible 40 ft. line-haul coaches will be replaced, thirty-three (33) CNG buses will be procured and its fleet of small, heavy-duty buses will be increased. In addition, customers will see improvements at bus stops as amenities such as seating, shelters, information signage and GPS based scheduling information will be upgraded and added.

DDOT's Plan aims to improve general operations by making major improvements and repairs to its existing facilities. A new state-of-the-art transit garage will be constructed to accommodate DDOT's increasing fleet, storage and stocking needs and changes in repair and maintenance technology. In addition service and support vehicles and general shop equipment will be procured to maintain proper operations.

### **INTERDEPARTMENTAL CAPITAL RELATIONSHIPS**

The Department's major investment projects, such as the Timed Transfer Centers, construction of a downtown intermodal transit center and implementation of the Downtown Mobility Management System will require cooperation, service and action from the following departments: Department of Public Works, Planning and Development, Water and Sewerage, Public Lighting, Municipal Parking and Recreation. Several of these departments may be responsible for providing the infrastructure and supporting the maintenance requirements for these projects. The impact on these department's budgets cannot currently be determined.

### **GOALS FOR CAPITAL PROGRAM**

The general goal of The Department's Capital Plan is to improve overall external and internal operations for the benefit of existing customers, to attract new customers and develop new business relationships. The goals will be carried out through the following objectives:

- (1) Provide transportation service that is efficient by implementing its major investment projects that are directly geared towards improving system efficiency.
- (2) Provide safe, reliable and well maintained service through fleet replacement, expansion and maintenance programs.
- (3) Provide cost effective service through procurement of fuel efficient buses that decreases overall fleet maintenance costs.
- (4) Provide customer-driven and user-friendly service by upgrading and improving bus stop amenities and availability of schedule information.
- (5) Stabilize D-DOT's infrastructure and provide quality work environments that encourage improved employee performance and productivity through major facility repairs and upgrades
- (6) Develop new, and foster existing business relationships by seeking collaboration and cooperation on major investment projects, support cultural events, areas of employment and commerce by providing transportation service to those areas.

## TRANSPORTATION

### **RATIONALE FOR CAPITAL PROGRAM**

DDOT's Capital Program supports the Department's missions and reflects its capital needs to carry out its goals. The Program is based on (1) projects that are eligible for funding under Federal and State guidelines, (2) what can be reasonably funded based on expected funding levels and (3) the Department's ability to obtain matching funds for federal grant funds. DDOT does not expect significant increases in funding levels for transit over the next six years.

The Capital Program was also developed to meet the Federal Highway Act/Federal Transit Act (FHWA/FTA) transportation planning regulations to address service equity issues (Title VI), Americans with Disabilities Act (ADA) requirements public involvement in the planning process and planning coordination with the local MPO (SEMCOG).

The Capital Program is consistent with the Transportation Improvement Program (TIP) required by the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) and the 2025 Regional Transportation Plan.



## TRANSPORTATION

### **Automatic Passenger Counting System**

Purchase hardware and software for passenger counting system (2000)

2000-01-Budget- \$480,000- Federal Transit Administration (FTA) 5307 grant

\$120,000 - MDOT

### **ROLLING STOCK**

#### **(A) Expansion**

Procure 33 Compressed Natural Gas (CNG) buses over a three-year period to bring total CNG fleet to 50. 20 buses delivered between 2000-2001, and 13 buses in 2002.

2000-01- Budget - \$2,640,000- Federal Transit Administration (FTA) 5309 grant;  
\$ 660,000- MDOT

|         |             |                  |
|---------|-------------|------------------|
| 2001-02 | \$2,640,000 | FTA Section 5309 |
|         | \$ 660,000  | MDOT             |
| 2002-03 | \$3,432,000 | FTA Section 5309 |
|         | \$ 858,000  | MDOT             |

#### **(B) Replacement**

Coach Replacement Schedule:

FY 2000-01 replace 100 age eligible GM Classic coaches

FY 2001-02 replace 135 various age eligible coaches

FY 2004 replace 121 age eligible New Flyer coaches

FY 2005 replace 4 age eligible Chance coaches

2000-01- Budget- \$11,872,000- FTA Section 5307  
\$ 2,968,000- MDOT

|         |              |                  |
|---------|--------------|------------------|
| 2001-02 | \$11,872,000 | FTA Section 5307 |
|         | \$ 2,968,000 | MDOT             |
| 2004-05 | \$11,872,000 | FTA Section 5307 |
|         | \$ 2,968,000 | MDOT             |
| 2005-06 | \$11,872,000 | FTA Section 5307 |
|         | \$ 2,968,000 | MDOT             |

### **Communication Equipment**

(a) Replace current phones with digital phone system (FY 2000)

(b) Replace vehicle radio equipment  
(FY 2001)

(c) Upgrade dispatch and base station with AVL compatible equipment

(d) Install electronic destination signage (FY 2002)

2000-01- Budget- \$2,400,000- FTA Section 5307  
\$ 600,000- MDOT

|         |             |                  |
|---------|-------------|------------------|
| 2001-02 | \$2,000,000 | FTA Section 5307 |
|         | \$ 500,000  | MDOT             |
| 2002-03 | \$3,200,000 | FTA Section 5307 |
|         | \$ 800,000  | MDOT             |

## TRANSPORTATION

### **FACILITIES**

#### **(A) Facility Construction**

Design, engineering and construction of a compressed natural gas facility that will accommodate fueling and maintenance for approximately 50 CNG buses.

2000-01- Budget- \$5,503,184- FTA Section 5307  
\$1,375,796- MDOT  
\$2,500,000- CMAQ

|         |             |                  |
|---------|-------------|------------------|
| 2001-02 | \$2,400,000 | FTA Section 5307 |
|         | \$ 600,000  | MDOT             |

#### **(B) Facility Rehabilitation**

Rehabilitation of existing building for temporary CNG facility

2000-01- Budget- \$260,000- FTA Section 5307  
\$ 65,000- MDOT

#### **(C) Facility Rehabilitation-Gilbert Terminal**

(a) Continuation of retrofitting facility to comply with ADA standards (FY2000)

(b) Re-pave the VIP and executive parking lots (FY2002)

(c) Replace existing exhaust ventilation system in garage area (FY2003)

2000-01- Budget- \$240,000- FTA Section 5307  
\$ 60,000- MDOT

|         |            |                  |
|---------|------------|------------------|
| 2001-02 | \$ 240,000 | FTA Section 5307 |
|         | \$ 60,000  | MDOT             |
| 2002-03 | \$ 240,000 | FTA Section 5307 |
|         | \$ 60,000  | MDOT             |

#### **(D) Facility Improvements – Coolidge Terminal**

(a) Replace existing farebox house with facility configured for electronic fare handling (FY2004)

(b) Replace existing guard house (FY2004)

(c) Exterior painting (FY2005)

|         |             |                  |
|---------|-------------|------------------|
| 2004-05 | \$4,000,000 | FTA Section 5307 |
|         | \$1,000,000 | MDOT             |
| 2005-06 | \$4,000,000 | FTA Section 5307 |
|         | \$1,000,000 | MDOT             |

#### **(E) Facility Improvements – Shoemaker Terminal**

(a) Renovations of Rehab. Center (FY2004)

(b) Renovation of terminal building (FY2004)

(c) Renovate Old Administration Building (FY2005)

|         |             |                  |
|---------|-------------|------------------|
| 2004-05 | \$2,666,000 | FTA Section 5307 |
|         | \$ 667,000  | MDOT             |
| 2005-06 | \$2,666,000 | FTA Section 5307 |
|         | \$ 667,000  | MDOT             |

## TRANSPORTATION

### (F) Facility Improvements – Gilbert Terminal

A newly constructed state-of-the-art terminal is planned for this site that will accommodate approximately 500 coaches, new training facilities, offices and employee restrooms and a lounge.

|         |              |                  |
|---------|--------------|------------------|
| 2005-06 | \$12,000,000 | FTA Section 5307 |
|         | \$ 3,000,000 | MDOT             |

### Maintenance and Service Vehicles

- (a) Replace Utility Trucks FY2000
- (b) Purchase 3 1-ton snow plows and 3 dump trucks (FY2001)
- (c) Replace 3 Step vans (FY2002)
- (d) Replace 2 Elgin Street Sweepers (FY2002)
- (e) Replace 1 20 ton trailer (FY2003)
- (f) Purchase 1 welding truck (FY2000)

2000-01- Budget- \$1,328,302- FTA Section 5307  
\$ 332,075- MDOT

|         |            |                  |
|---------|------------|------------------|
| 2001-02 | \$ 320,000 | FTA Section 5307 |
|         | \$ 80,000  | MDOT             |
| 2002-03 | \$ 320,000 | FTA Section 5307 |
|         | \$ 80,000  | MDOT             |
| 2003-04 | \$ 320,000 | FTA Section 5307 |
|         | \$ 80,000  | MDOT             |

### Planning and Engineering

Planning, engineering and general consulting services for structural engineering analysis on DDOT's CNG facility, timed transfer centers and farebox facilities. Other services will include long-range transportation planning, route evaluation and service planning and multi-modal planning.

2000-01- Budget- \$ 240,000- FTA Section 5307  
\$ 60,000- MDOT

|         |            |                  |
|---------|------------|------------------|
| 2001-02 | \$ 240,000 | FTA Section 5307 |
|         | \$ 60,000  | MDOT             |
| 2002-03 | \$ 240,000 | FTA Section 5307 |
|         | \$ 60,000  | MDOT             |
| 2003-04 | \$ 240,000 | FTA Section 5307 |
|         | \$ 60,000  | MDOT             |

### Preventive Maintenance

General operating maintenance expenses.

FY 2000-01- Budget- \$6,400,000- FTA Section 5307  
\$1,600,000- MDOT

|         |             |                  |
|---------|-------------|------------------|
| 2001-02 | \$6,400,000 | FTA Section 5307 |
|         | \$1,600,000 | MDOT             |
| 2002-03 | \$5,600,000 | FTA Section 5307 |
|         | \$1,400,000 | MDOT             |

## TRANSPORTATION

|         |             |                  |
|---------|-------------|------------------|
| 2003-04 | \$5,600,000 | FTA Section 5307 |
|         | \$1,400,000 | MDOT             |
| 2004-05 | \$8,539,000 | FTA Section 5307 |
|         | \$2,135,000 | MDOT             |
| 2005-06 | \$8,539,000 | FTA Section 5307 |
|         | \$2,135,000 | MDOT             |

### Service Equipment

- (a) Upgrade color copier in Print Shop (FY2001)
- (b) Replace printing press (FY2003)
- (c) Purchase new folder for Print Shop (FY2003)
- (d) Replace sheet metal used to form various body parts for coaches (FY2002)
- (e) Purchase and replace general shop equipment and test machinery such as transmission dynamometer, air condition compressor test stand, engine dynamometer heat exchange/cooling tower and power steering pump tester (FY2001-2005)
- (f) Install electronic destination signage (FY2002)
- (g) Replace primary/secondary electrical switch gears to connect to Detroit Edison (FY2002)
- (h) Replace floor scrubbers (FY2001)
- (i) Upgrade current coach washers to brushless washer system (FY2003)
- (j) Purchase air compressor system (currently renting) (FY2003)
- (k) Purchase electric hoists (FY2004-2005)
- (l) Upgrade fare boxes with newer technology
- (m) Continuation of replacement of computer hardware and software to improve financial management, human resources and other management information systems (FY2000-2005)

FY 2000-01- Budget- \$1,696,000- FTA Section 5307  
\$ 424,000- MDOT

|         |             |                  |
|---------|-------------|------------------|
| 2001-02 | \$1,600,000 | FTA Section 5307 |
|         | \$ 400,000  | MDOT             |
| 2002-03 | \$1,600,000 | FTA Section 5307 |
|         | \$ 400,000  | MDOT             |
| 2003-04 | \$1,600,000 | FTA Section 5307 |
|         | \$ 400,000  | MDOT             |
| 2004-05 | \$1,600,000 | FTA Section 5307 |
|         | \$ 400,000  | MDOT             |
| 2005-06 | \$1,600,000 | FTA Section 5307 |
|         | \$ 400,000  | MDOT             |

### Timed Transfer Center

The Neighborhood Timed Transfer Center will be designed to support efforts of Detroiters who will need quality childcare services and convenient commuting. The Timed Transfer Centers will allow parents to drop their children off at a childcare and transfer to fixed or flex route lines. Phase I and II will have some retail shopping.

Planning and engineering and construction for Phase I: 2000-2002

Planning and engineering and construction for Phase II: 2003-2006

## TRANSPORTATION

2000-01- Budget- \$3,888,080- FTA Section 5307

\$ 281,574- MDOT

\$1,000,000- General Obligation Bonds

|         |              |                          |
|---------|--------------|--------------------------|
| 2002-03 | \$ 500,000   | General Obligation Bonds |
| 2003-04 | \$ 2,000,000 | FTA Section 5309         |
|         | \$ 500,000   | General Obligation Bonds |
| 2004-05 | \$ 1,500,000 | FTA Section 5309         |
|         | \$ 500,000   | General Obligation Bonds |
| 2005-06 | \$ 1,000,000 | General Obligation Bonds |
|         | \$ 4,100,000 | Unprogrammed             |

### **Downtown Mobility Management System**

Improve traffic flow and travel convenience by coordinating downtown transit services and parking facilities. The Mobility Management System would allow customers to use an integrated fare/fee payment system for seamless transition from parking facilities to the transit services.

|         |             |                          |
|---------|-------------|--------------------------|
| 2001-02 | \$1,000,000 | General Obligation Bonds |
| 2003-04 | \$1,700,000 | CMAQ                     |
|         | \$ 600,000  | MDOT                     |
| 2004-05 | \$1,700,000 | CMAQ                     |
|         | \$ 600,000  | MDOT                     |
| 2005-06 | \$1,700,000 | CMAQ                     |
|         | \$ 600,000  | MDOT                     |
|         | \$ 400,000  | Unprogrammed             |

### **Downtown Transit Center**

The Downtown Transit Center will replace the existing Cadillac Square transit center. The new transit center will be located adjacent to the People Mover Times Square station.

|         |              |                          |
|---------|--------------|--------------------------|
| 2001-02 | \$ 8,000,000 | FTA Section 5309         |
|         | \$ 1,000,000 | CMAQ                     |
| 2002-03 | \$ 8,000,200 | FTA Section 5309         |
|         | \$ 1,000,000 | CMAQ                     |
|         | \$ 500,000   | General Obligation Bonds |
| 2003-04 | \$ 500,000   | General Obligation Bonds |
| 2004-05 | \$ 500,000   | General Obligation Bonds |
|         | \$ 4,500,000 | Unprogrammed             |

## TRANSPORTATION

### **Bus Stop Improvements**

- (a) Bus Shelters: An annual average of 20 bus shelters will be installed or renovated (FY2001)
- (b) Seating, trash receptacles will be installed (FY2001)
- (c) Install, upgrade and maintain bus stop signs (FY2001)
- (d) Install information signage (FY2002)
- (e) Install GPS based scheduling information systems at transit centers (FY2003-2004)

|         |              |                  |
|---------|--------------|------------------|
| 2001-02 | \$2,040,000  | FTA Section 5307 |
|         | \$ 510,000   | MDOT             |
| 2002-03 | \$2,040,000  | FTA Section 5307 |
|         | \$ 510,000   | MDOT             |
| 2003-04 | \$1,398,400  | FTA Section 5307 |
|         | \$ 174,800   | MDOT             |
| 2004-05 | \$ 680,000   | FTA Section 5307 |
| 2005-06 | \$ 718,400   | FTA Section 5307 |
|         | \$ 2,620,000 | Unprogrammed     |

# TRANSPORTATION

(000's OMITTED)

| Projects                            | *<br>Project<br>Status | **<br>Project<br>Timeline | ***<br>Impact<br>on Budget | Funding<br>Source                | Authorized<br>Unissued | (Budget)<br>2000-01     | ***** 5 Year Capital Plan ***** |              |         |                 |                 | Unprogrammed |
|-------------------------------------|------------------------|---------------------------|----------------------------|----------------------------------|------------------------|-------------------------|---------------------------------|--------------|---------|-----------------|-----------------|--------------|
|                                     |                        |                           |                            |                                  |                        |                         | 2001-02                         | 2002-03      | 2003-04 | 2004-05         | 2005-06         |              |
| Automatic Passenger Counting System | N                      | P                         | NOI/NSI                    | S.T.G.-9<br>F.T.G.-9             |                        | \$120<br>480            |                                 |              |         |                 |                 |              |
| New Coaches                         | N                      | P                         | AF/AS                      | S.T.G.-9<br>F.T.G.-9             |                        | 660<br>2,640            | 660<br>2,640                    | 858<br>3,432 |         |                 |                 |              |
| Coach Replacement                   | M                      | O                         | NOI/NSI                    | S.T.G.-9<br>F.T.G.-9             |                        | \$2,968<br>11,872       | 2,968<br>11,872                 |              |         | 2,968<br>11,872 | 2,968<br>11,872 |              |
| Communications Equipment            | M                      | O                         | NOI/NSI                    | S.T.G.-9<br>F.T.G.-9             |                        | 600<br>2,400            | 500<br>2,000                    | 800<br>3,200 |         |                 |                 |              |
| Natural Gas Facility                | M                      | O                         | NOI/NSI                    | S.T.G.-9<br>F.T.G.-9<br>C.M.A.Q. |                        | 1,375<br>5,503<br>2,500 | 600<br>2,400                    |              |         |                 |                 |              |
| Temporary CNG Facility              | M                      | O                         | NOI/NSI                    | S.T.G.-9<br>F.T.G.-9             |                        | 65<br>260               |                                 |              |         |                 |                 |              |
| Central Terminal Improvements       | M                      | O                         | NOI/NSI                    | S.T.G.-9<br>F.T.G.-9             |                        | 60<br>240               | 60<br>240                       | 60<br>240    |         |                 |                 |              |
| Coolidge Terminal Improvements      | M                      | O                         | NOI/NSI                    | S.T.G.-9<br>F.T.G.-9             |                        |                         |                                 |              |         | 1,000<br>4,000  | 1,000<br>4,000  |              |
| Sub-Total (page 1)                  |                        |                           |                            |                                  | \$0                    | \$31,743                | \$23,940                        | \$8,590      | \$0     | \$19,840        | \$19,840        | \$0          |
| Funding Source Summary (page 1): #  |                        |                           |                            |                                  |                        |                         |                                 |              |         |                 |                 |              |
| State Transportation Grants ##      |                        |                           |                            | S.T.G.                           |                        | \$5,848                 | \$4,788                         | \$1,718      | \$0     | \$3,968         | \$3,968         | \$0          |
| Federal Transportation Grants ##    |                        |                           |                            | F.T.G.                           |                        | \$25,895                | \$19,152                        | \$6,872      | \$0     | \$15,872        | \$15,872        | \$0          |
| TOTAL TRANSPORTATION GRANTS         |                        |                           |                            |                                  |                        | \$31,743                | \$23,940                        | \$8,590      | \$0     | \$19,840        | \$19,840        | \$0          |
| General Obligation Bonds            |                        |                           |                            | G.O.                             |                        |                         |                                 |              |         |                 |                 |              |
| Cash Capital                        |                        |                           |                            | C.C.                             |                        |                         |                                 |              |         |                 |                 |              |

**Notes:**

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 Federal allocations for FY2000-01 have not yet been established.

## State Transportation Grants (Michigan Department of Transportation: Section 9 and Section 3 Grants)

## Federal Transportation Grants (Federal Transit Administration: Section 9 and Section 3 Grants)

\* PROJECT STATUS: M=project is maintaining current infrastructure; N=Project will result in new development

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# TRANSPORTATION

(000's OMITTED)

| Projects                           | *<br>Project<br>Status | **<br>Project<br>Timeline | ***<br>Impact<br>on Budget | Funding<br>Source            | Authorized<br>Unissued | (Budget)<br>2000-01   | ***** 5 Year Capital Plan ***** |                |                |                |                | Unprogrammed |
|------------------------------------|------------------------|---------------------------|----------------------------|------------------------------|------------------------|-----------------------|---------------------------------|----------------|----------------|----------------|----------------|--------------|
|                                    |                        |                           |                            |                              |                        |                       | 2001-02                         | 2002-03        | 2003-04        | 2004-05        | 2005-06        |              |
| Shoemaker Terminal Improvements    | M                      | O                         | NOI/NSI                    | S.T.G.-9<br>F.T.G.-9         |                        |                       |                                 |                |                | 667<br>2,666   | 667<br>2,666   |              |
| Maintenance and Service Vehicles   | M                      | O                         | NOI/NSI                    | S.T.G.-9<br>F.T.G.-9         |                        | 332<br>1,328          | 80<br>320                       | 80<br>320      | 80<br>320      |                |                |              |
| Planning and Engineering           | M                      | O                         | NOI/NSI                    | S.T.G.-9<br>F.T.G.-9         |                        | 60<br>240             | 60<br>240                       | 60<br>240      | 60<br>240      |                |                |              |
| Prventive Maintenance              | M                      | O                         | NOI/NSI                    | S.T.G.-9<br>F.T.G.-9         |                        | 1,600<br>6,400        | 1,600<br>5,600                  | 1,400<br>5,600 | 1,400<br>5,600 | 2,135<br>8,539 | 2,135<br>8,539 |              |
| Service Equipment                  | M                      | O                         | NOI/NSI                    | S.T.G.-9<br>F.T.G.-9         |                        | 424<br>1,696          | 400<br>1,600                    | 400<br>1,600   | 400<br>1,600   | 400<br>1,600   | 400<br>1,600   |              |
| Timed Transfer Center              | N                      | P                         | AF/AS                      | S.T.G.-3<br>F.T.G.-3<br>G.O. | \$3,000                | 281<br>3,888<br>1,000 |                                 |                | 2,000<br>500   | 1,500<br>500   | 1,000          | 4,100        |
| Sub-Total (page 2)                 |                        |                           |                            |                              | \$3,000                | \$17,249              | \$9,900                         | \$10,200       | \$12,200       | \$18,007       | \$17,007       | \$4,100      |
| Funding Source Summary (page 2): # |                        |                           |                            |                              |                        |                       |                                 |                |                |                |                |              |
| State Transportation Grants ##     |                        |                           |                            | S.T.G.                       |                        | \$2,697               | \$2,140                         | \$1,940        | \$1,940        | \$3,202        | \$3,202        | \$0          |
| Federal Transportation Grants ##   |                        |                           |                            | F.T.G.                       |                        | \$13,552              | \$7,760                         | \$7,760        | \$9,760        | \$14,305       | \$12,805       | \$0          |
| TOTAL TRANSPORTATION GRANTS        |                        |                           |                            |                              |                        | \$16,249              | \$9,900                         | \$9,700        | \$11,700       | \$17,507       | \$16,007       | \$0          |
| General Obligation Bonds           |                        |                           |                            | G.O.                         | \$3,000                | \$1,000               | \$0                             | \$500          | \$500          | \$500          | \$1,000        | \$4,100      |
| Cash Capital                       |                        |                           |                            | C.C.                         |                        |                       |                                 |                |                |                |                |              |

**Notes:**

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# TRANSPORTATION

(000's OMITTED)

| Projects                            | *                 | **                  | ***                 |                              |                        |                     | ***** 5 Year Capital Plan ***** |                       |              |              |              |              |
|-------------------------------------|-------------------|---------------------|---------------------|------------------------------|------------------------|---------------------|---------------------------------|-----------------------|--------------|--------------|--------------|--------------|
|                                     | Project<br>Status | Project<br>Timeline | Impact<br>on Budget | Funding<br>Source            | Authorized<br>Unissued | (Budget)<br>2000-01 | 2001-02                         | 2002-03               | 2003-04      | 2004-05      | 2005-06      | Unprogrammed |
| Downtown Mobility Management System | N                 | P                   | AF/AS               | S.T.G.-9<br>C.M.A.Q.<br>G.O. | 1,000                  |                     |                                 |                       | 600<br>1,700 | 600<br>1,700 | 600<br>1,700 | 400          |
| Downtown Transit Center             | N                 | P                   | AF/AS               | F.T.G.-9<br>C.M.A.Q.<br>G.O. | 2,000                  |                     | 8,000<br>1,000                  | 8,000<br>1,000<br>500 |              | 500          |              | 4,500        |
| Bus Stop Improvements               | M                 | O                   | NOI/NSI             | S.T.G.-9<br>F.T.G.-9<br>G.O. | 1,000                  |                     | 510<br>2,040                    | 510<br>2,040          | 174<br>1,398 | 680          | 718          | 2,620        |
| Sub-Total (page 3)                  |                   |                     |                     |                              | \$4,000                | \$0                 | \$12,550                        | \$12,050              | \$4,372      | \$3,480      | \$3,018      | \$7,520      |
| Funding Source Summary (page 3): #  |                   |                     |                     |                              |                        |                     |                                 |                       |              |              |              |              |
| State Transportation Grants ##      |                   |                     |                     | S.T.G.                       |                        | \$0                 | \$510                           | \$510                 | \$774        | \$600        | \$600        | \$0          |
| Federal Transportation Grants ##    |                   |                     |                     | F.T.G.                       |                        | \$0                 | \$11,040                        | \$11,040              | \$3,098      | \$2,380      | \$2,418      | \$0          |
| TOTAL TRANSPORTATION GRANTS         |                   |                     |                     |                              |                        | \$0                 | \$11,550                        | \$11,550              | \$3,872      | \$2,980      | \$3,018      | \$0          |
| General Obligation Bonds            |                   |                     |                     | G.O.                         | \$4,000                | \$0                 | \$1,000                         | \$500                 | \$500        | \$500        | \$0          | \$7,520      |
| Cash Capital                        |                   |                     |                     | C.C.                         |                        |                     |                                 |                       |              |              |              |              |

## Notes:

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## TRANSPORTATION

(000's OMITTED)

| Projects                           | *<br>Project<br>Status | **<br>Project<br>Timeline | ***<br>Impact<br>on Budget | Funding<br>Source | Authorized<br>Unissued | (Budget)<br>2000-01 | ***** 5 Year Capital Plan ***** |          |          |          |          | Unprogrammed |
|------------------------------------|------------------------|---------------------------|----------------------------|-------------------|------------------------|---------------------|---------------------------------|----------|----------|----------|----------|--------------|
|                                    |                        |                           |                            |                   |                        |                     | 2001-02                         | 2002-03  | 2003-04  | 2004-05  | 2005-06  |              |
| GRAND TOTALS                       |                        |                           |                            |                   | \$7,000                | \$48,992            | \$46,390                        | \$30,840 | \$16,572 | \$41,327 | \$39,865 | \$11,620     |
| Funding Source Summary (totals): # |                        |                           |                            |                   |                        |                     |                                 |          |          |          |          |              |
| State Transportation Grants ##     |                        |                           |                            | S.T.G.            |                        | \$8,545             | \$7,438                         | \$4,168  | \$2,714  | \$7,770  | \$7,770  | \$0          |
| Federal Transportation Grants ##   |                        |                           |                            | F.T.G.            |                        | \$39,447            | \$37,952                        | \$25,672 | \$12,858 | \$32,557 | \$31,095 | \$0          |
| TOTAL TRANSPORTATION GRANTS        |                        |                           |                            |                   |                        | \$47,992            | \$45,390                        | \$29,840 | \$15,572 | \$40,327 | \$38,865 | \$0          |
| General Obligation Bonds           |                        |                           |                            | G.O.              | \$7,000                | \$1,000             | \$1,000                         | \$1,000  | \$1,000  | \$1,000  | \$1,000  | \$11,620     |
| Cash Capital                       |                        |                           |                            | C.C.              |                        | \$0                 | \$0                             | \$0      | \$0      | \$0      | \$0      | \$0          |

Notes:

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## State Transportation Grants (Michigan Department of Transportation: Section 9 and Section 3 Grants)

## Federal Transportation Grants (Federal Transit Administration: Section 9 and Section 3 Grants)

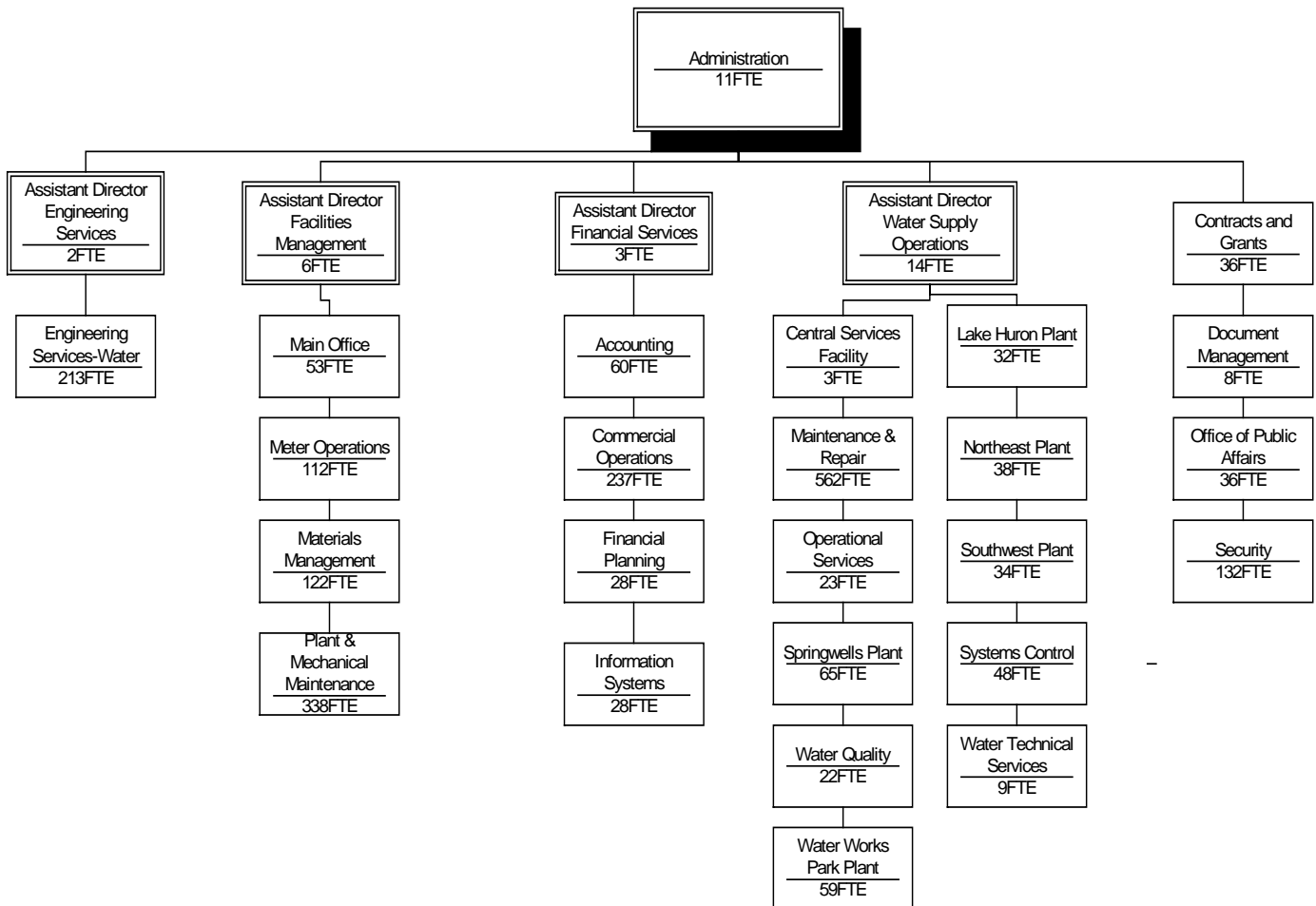
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# WATER



## **WATER**

### **A GENCY MISSION**

The mission of the Water and Sewerage Department is to exceed our customer expectations through the innovative treatment and transmission of water and wastewater, and the provision of services that promote healthy communities and economic growth.

#### **Water Supply System Goals**

To provide and distribute a sufficient quantity of potable water at adequate pressure for all customers in the service area; to provide water in conformance to applicable standards as required by Michigan's Safe Drinking Water Act; and to provide sufficient water pressure and pipeline service in order to assure fire protection of acceptable quality within the corporate limits of the City of Detroit.

### **CURRENT FACILITIES**

#### **Water Supply System (41)**

The Detroit Water and Sewerage Department operates five water treatment plants and twenty-one booster (repumping) stations and reservoirs. Of these five water plants, two are located in Detroit and one each is located in Allen Park, Dearborn, and Port Huron. There are three sources of water supply - Detroit River at Fighting Island, Detroit River at Belle Isle and Lake Huron north of Port Huron. These plants have a combined firm capacity of 1,700 million gallons per day (mgd) against a normal system peak demand of over 1,000 mgd.

The water supply system serves a total population of approximately 3,900,000 people in Detroit and one hundred twenty-six communities within a 981 square mile service area in southeastern Michigan. The main administrative offices are located at 735 Randolph in

downtown Detroit. The Department has two maintenance yards located in central and west areas of the City of Detroit. Approximately 3,435 miles of water transmission and distribution mains are owned and maintained by the Department.

The Water Supply System capital improvement plan schedules are presented in the Capital Agenda according to major program categories because individual projects would be too numerous to include separately. The most important projects for each program category are listed later in this document.

### **FIVE YEAR HISTORY**

Except as otherwise noted, revenues of the Water Supply System provided funding for these improvements.

#### **Fiscal Year 1999-00**

- Master Meter Replacement / Automatic Meter Reading  
\$1,788,000

This project involved DWSD Facilities Design Group designing the final phase of a rehabilitation and improvements program of the suburban water meter pits. The design included digital Automatic Meter Reading (AMR) and instrumentation equipment with radio based supervisory control and data acquisition (SCADA) equipment at 275 sites. It also included two head-end systems with computers to collect data.

- Adams Station Improvements  
\$799,000

This project involved Ghafari Associates, Inc. providing technical engineering services for the study and design phases and assistance during the construction phase of a ten million gallon reservoir, reservoir pumping units

## WATER

and other needed improvements at the Adams Road Station in Bloomfield Township. This project also provided preparation of contract documents for the construction phase of Adam Road Station based on recommended improvements from the study report.

Amendment No. 1 provided for additional technical and engineering services requested by DWSD in developing a comprehensive program for the plan, design, and construction phases of Adams Road Station Improvements. This amendment further involved the design of an additional fill and suction line to the yard piping for a future ten million-gallon reservoir at the site. Ghafari Associates, Inc. investigated variable frequency drive alternatives for the proposed reservoir pumps and hydro energy recovery alternatives. The consultant also submitted design review applications and fees on behalf of DWSD to local government agencies; and, performed subsoil exploration and related geotechnical engineering services.

- Water Works Park Crib House Rehabilitation \$1,291,000

This project involved the rehabilitation of Water Works Park Crib House, surge basins, and emergency intake. The work included selective demolition and replacement of windows, entrance doors, and frames, downspout retainers, hatch and frames, portions of concrete walk, thorough cleaning and painting of interior wood and metal surfaces, and removal and replacement of lifting hoists. The work also consisted of the removal of accumulated silt and debris from the Crib House by hydraulic dredging and disposal to an upland site and grouting open mortar joints in the ten-foot diameter tunnel and shaft. It also provided for the removal and disposal of wood debris at the intake

site. The work further involved the removal and repair of the interior concrete in the underwater areas of the crib house, disposal and replacement of the removal concrete covers and the bends of two shore shaft surge basins.

Change orders included but were not limited to: tuckpointing of an additional 396 feet of missing mortar at joints of the stone parapet wall, additional removal of wood debris, and application of sealant to Crib House exterior. Also, lead-bearing paint was contained and disposed of according to the legal requirements.

- 72" Main – Quarton Road from Brookdale Park Road to Lahser to Lincoln Road \$8,219,000

This project involved the furnishing, installing, chlorinating, flushing and testing of approximately 17,731 linear feet of 72-inch diameter prestressed concrete embedded steel cylinder pipe with rubber and steel joints, including all appurtenances, connections and related structures. This work was performed along Big Beaver Road, Quarton Road, and Lahser Road from Woodward Avenue to Berkshire Drive in Bloomfield Township, City of Bloomfield Hills, and the City of Birmingham. This work also provided for tunnel crossings where the water main passes under Woodward Avenue and the Rouge River. Approximately 1,950 feet of 8-inch sanitary sewer lines were relocated in the City of Birmingham along Quarton Road from Lakeside Road to Chesterfield Road.

- Water Main Replacement – Western District \$1,817,000

This project involved the replacement of existing water mains in various streets throughout the Western District in the City of Detroit. The work consisted of replacing 4-inch, 6-inch, 8-inch, 12-inch,

## WATER

and 16-inch water mains with approximately 17,278 linear feet of 8-inch, 85 linear feet of 12-inch, and 46 linear feet of 16-inch ductile iron water main with an 8-mil polyethylene wrap. The work also included the connection of existing service connections and fire hydrants, gate valves and the connection of the new mains to existing mains in service. The work further included the installation of gate valves, gate boxes, construction of new gate wells, replacement of hydrants and all appurtenances, chlorinating and flushing new water mains, and related miscellaneous work.

- Water Main Replacement – Various Streets – Northern and Central Districts \$1,537,000

This project involved the replacement of existing water mains in the Northern and Central districts in the City of Detroit. The work consisted of replacing 6-inch, 8-inch, and 16-inch water mains with approximately 15,862 linear feet of 8-inch and 12-linear feet of 16-inch ductile iron water main with an 8-mil polyethylene wrap. The work also included the connection of existing service connections and fire hydrants, gate valves and the connection of the new mains to existing mains in service. The work further included the installation of gate valves, gate boxes, construction of new gate wells, replacement of hydrants and all appurtenances, chlorinating and flushing new water mains, and related miscellaneous work.

- Water Main Replacement – Various Streets – Eastern District \$1,764,000

This project involved the replacement of existing water mains in various streets throughout the Eastern district of the city of Detroit. The work consisted of replacing 4-inch, 6-inch, 8-inch, and 12-

inch water mains with approximately 13,980 linear feet of 8-inch, 779 linear feet of 12-inch ductile iron water main with an 8-mil polyethylene wrap. It also involved the furnishing and installing of approximately 63 linear feet of 16-inch steel casing pipe in place of 8-inch ductile iron water main under the Consolidated Railroad tracks by the jacking and boring method. The work included the connection of existing service connections and fire hydrants, gate valves and the connection of the new mains to existing mains in service. The work further included the installation of gate valves, gate boxes, the construction of new gate wells, the replacement of hydrants and all appurtenances, the chlorinating and flushing of new water mains, and related miscellaneous work.

- Water Main Replacement – Western District \$1,596,000

This project involved the replacement of existing water mains in various streets throughout the Western District in the city of Detroit. The work consisted of the replacing 6-inch, 8-inch, and 16-inch water mains with approximately 15,197 linear feet of 8-inch and 14-linear feet of 16-inch ductile water main. The work also included the installation of 8-inch and 16-inch gate valve, 8-mil polyethylene wrap and construction of all appurtenances, connections and related structures.

- Adams Road Station Improvements \$10,429,000

This project involved constructing a ten million gallon prestressed concrete reservoir, completing related yard piping, site work, pump installation, and related piping at the Adams Road Station in Bloomfield Township. The work also provided for valves, the removal and replacement of an existing variable

## WATER

speed drive system on Line Pump L1, construction of an electrical service building and miscellaneous electrical improvements.

- Removal, Remediation, and Installation of Underground Storage Tanks \$155,000

This project involved the removal of eight underground storage tanks at Lake Huron Plant, Water Works Park, Springwells, Ford Road Station, Wastewater Treatment Plant, and Southwest Water Plant, with associated site clean-up and required disposal of contaminated soil and preparation of necessary regulatory reports. The work further involved the installation of nine new underground storage tanks with associated appurtenant systems, piping, leak detection, fuel dispensing and control systems. This project was initiated and completed to comply with federal underground storage tank regulations and the State of Michigan Underground Storage Tank Regulatory Act (PA423).

Change orders one and two involved the removal and disposal of 1440 cubic yards of contaminated soil, contaminated water removal and disposal, and asphalt and concrete paving at the sites. It also provided for additional professional environmental services as mandated by the Michigan Department of Natural Resources.

- Suburban Master Meter Replacement #3 and Meter Pit Rehabilitation and Upgrading #2 \$11,142,000

This project involved the replacement of 59 master meters and the rehabilitation of 121 existing water meter pits at a total of 156 suburban locations. Work consisted of the reconfiguration of meter installation piping, meter size change and associated lead joint work, replacement of non-functioning valves,

and the installation of automatic butterfly control valves. Further rehabilitation consisted of replacement of sump pumps and vent fans, leak repairs, waterproofing, and changing the size and location of disconnect switches on control cabinets. Additional work completed at meter replacement sites only consisted of the modification and construction of equipment access to manholes and construction of pipe supports.

- Water System Improvements, Various Streets Throughout the City \$1,680,000

This project involved the replacement or abandonment of existing water mains in various streets throughout the City of the Detroit. The work consisted of replacing 6-inch, 8-inch, and 12-inch water main with 13,871 linear feet of 8-inch and 288 linear feet of 12-inch City furnish ductile iron water main. It provided for the furnishing and installing of approximately 137 feet of 16-inch diameter steel casing pipe for 8-inch ductile iron main under the Consolidated Railroad tracks, with 8-mil polyethylene wrap; including all appurtenances, connections and related structures. The work also included the replacement of fire hydrants and all appurtenances, chlorinating and flushing new water mains, and related miscellaneous work. The work further included the connection of new mains, the installation of gate valves, gate boxes, and the construction of new gate wells.

### Fiscal Year 1998-99

- 42 - 60-Inch Water Main in Easements along Wayne/Washtenaw County Line \$8,499,000

This project provided a water main supply line to Canton, Plymouth,

## WATER

Superior, Van Buren and Ypsilanti Townships. It involved the furnishing, installing, chlorinating, flushing, and testing of approximately 11,637 linear feet of 60-inch, 13,822 linear feet of 42-inch, thirteen linear feet of 36-inch and eighty-seven linear feet of 24-inch diameter prestressed concrete embedded cylinder pipe with rubber and steel joints (SP-12). This also included the appurtenances, connections and related structures. Change orders included but were not limited to: cost for furnishing twenty-four linear feet of 102-inch concrete pipe, extend 60-inch sleeve five feet, excavate & sink a shaft at the bend at Station 244+72.8, install steel sheeting along the 42-inch encasement and well point system for additional dewatering. It also included the removal and replacement of 48-inch storm piping at Station 65+60 and 1½" MBT cable encountered at Station 0+40, and cost for labor & materials to extend the entrance manhole structure at Station 243+20 by nine feet more than originally planned at Station 247+71.3.

- 72-Inch Main – Lahser from Lincoln Road to 14 Mile Road to E. of Inkster Road \$15,517,000

This project involved work performed on the Fourteen Mile/Lahser Roads 72-inch water main from Inkster Road to Berkshire Drive. The work consisted of the construction of approximately 18,185 linear feet of 72-inch diameter prestressed concrete embedded cylinder pipe with rubber and steel joints (SP-12) including all appurtenances, connection and related structures. Change orders included but were not limited to: lowering the 72-inch water main by an average depth of 3.33 feet, cost for additional saw cutting, removal of concrete & asphalt pavement, and cutting and splicing ½-inch of steel piling sheets. It included the extension

of contracts between M & M and Arborist, Owen Tree Service, Inc., modifying twenty feet of tunnel on Fourteen Mile Rd. west of Lahser Road to a lower invert and lowering the 72-inch water main by an average depth of 2.7 ft. The work also consisted of installing nine additional dewatering wells, extra excavation, mud-jacking pavement on Telegraph Road, and additional pipe closures.

- 72-Inch Main – Adams Station – Adams Rd. to Quarton Rd. to Brookdale Park Rd. \$11,691,000

This project connected the Adams and Franklin Pump Stations, and also brought Port Huron Plant water to Franklin Station. This project involved furnishing, installing, chlorinating, flushing and testing approximately 20,746 linear feet of 72-inch and seventy-five linear feet of 36-inch diameter prestressed concrete embedded steel cylinder pipe with rubber and steel joints. It included all appurtenances, connections and related structures, and installation of Owner-furnished equipment. Change orders included but were not limited to installation of sheet piling, CMP liners and, 72-inch water main under the Grand Trunk Railroad's (GTWRR) bridge on Big Beaver.

- Southwest Water Treatment Plant Reservoir No. 3 Rehabilitation \$1,705,000

This project involved rehabilitation of Southwest Water Treatment Plant, Reservoir No. 3. The work included replacement of corroded structural members and appurtenances, sand blasting, priming and painting interior and exterior of reservoir, service road paving around the tank and installing a Cathodic system. Change orders



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included but were not limited to: removal and replacement of 345 rafters and grinders at various radii, different sizes and in varying length, furnishing and installing a 25 KVA, 480 Volt Primary and 240-120 Secondary Volt. It also provided for a transformer suitable for outdoor use, removal and disposal of 1,068 feet of rim angle around the perimeter of the tank and reinforcing the connection between the tank wall and the baffle wall.

- Rehabilitation of Auxiliary Low Lift Pumps and High Lift Transmission Piping \$10,563,000

This project involved the construction management of rehabilitation of an auxiliary Low Lift pump station and a High Lift transmission piping at Water Works Park. The work consisted of modifications to alum and carbon feed Structures, Auxiliary Low Lift Venturi Meters, Coagulation Basin, Auxiliary Low Lift Pump Station, and selected necessary architectural / structural / electrical improvements. The work also included removal of an existing High Lift Transmission Piping and installation of new High Lift Transmission Piping, new Gate Valves and Chambers, and new Venturi Tubes and Chambers. It further included removing Cone Valves from pressure reducing chambers and installation of new Cone Valves, installation of Cone Valve Control System, and modifications and additions to differential transmitting stations.

- Computer Assisted Mapping – Suburban-Phase I \$2,526,000

This project involved a time extension for contract CS-1213. The contract provided for the conversion of select Suburban Water and Sewer section maps into digital computer graphics systems showing DWSD facilities only. It also

provided for the connection of features to a complete database; the scanning and indexing of the master meter drawings, and gate book sheets; pressure reducing valve; and, wastewater control facility drawings. This contract provided additional time for DWSD to purchase and install the Geographic Information System hardware and software, and provided training for DWSD personnel in different facets of the project. This project was financed jointly by the Water Supply System and the Sewage Disposal System.

- Eastside Customer Service Center \$325,000

This project involved the purchase of land and the building located at 13297-13301 E. McNichols for an Eastside Customer Service Center. The work consisted of rehabilitating, and replacing the HVAC units and emergency repair of the center. The building contains 12,000 square feet and has parking to accommodate approximately fifty vehicles. In addition to providing customer service for water and sewerage customers, MichCon leases space from DWSD thereby allowing the facility to retain the “energy concept” of utilities working and sharing office space. This project was financed jointly by the Water Supply System and the Sewage Disposal Systems.

### Fiscal Year 1997-98

- Electrical Service – Water Stations and Main Office Building \$153,000

This project involved the conversion of primary electrical service from the Detroit Public Lighting Department to the Detroit Edison Company (DECO). DECO will provide electrical service to the following locations: Detroit Water

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Board Building, Springwells Water Plant and Central Services Facility.

- 72-Inch Water Main – Goddard Road from Moran Road to Allen Road \$3,337,000

This project involved the installation of approximately 5,174 linear feet consisting of 72-inch water transmission main in Goddard Road to Allen Road in Southgate, Michigan. The main was prestressed concrete embedded cylinder pipe with rubber and steel joints (SP-12). Change orders included but were not limited to: removal and disposal of 1,000 cubic yards of contaminated soil as required by Michigan Department of Natural Resources replacement of manhole covers and frames underneath I-75 overpass bridge; relocation of two 4-inch gas lines and one 2-inch gas line by MichCon; and repairs made by MichCon to a 12-inch gas main that was damaged during construction

- Emergency Repair of Filter Building Roof at WWP \$2,217,000

This project involved replacement of the roof on Filter Gallery No. 5 because of possible contamination to the potable water. Lead based particles had been discovered in rainwater that had leaked through the roof. The project further involved the installation of temporary roofing over the remainder of the Filter Building; and mechanical and electrical work throughout the building. The work also included the relocation of nine light fixtures in Gallery No. 5.

- Filter Bed Rehabilitation – Springwells \$11,475,000

This project involved the rehabilitation of filters numbers sixty-one through sixty-eight at the Springwells Water Treatment Plant. The work included removal and disposal of the existing

media and underdrain system; installation of new tile block underdrain cast iron washwater troughs; vertical extensions of the concrete gullet wall; installation of a new computer system and programmable controllers; rehabilitation of valve, rate of flow controllers and filter control consoles; general rehabilitation in the areas of filters sixty-one through sixty-eight including installation in the area heating system replacement; asbestos material removal and disposal; piping, concrete and floor surface repair, and general cleanup.

- Southwest Water Treatment Plant Rehabilitation, Chlorine & HVAC Rehabilitation \$6,276,000

This project involved the rehabilitation of Southwest Water Treatment Plant's chlorination system; removal of one steam boiler and auxiliary facilities; installation of a new steam generator system and a new dehumidification system; installation of a 32-inch valve; and the repairing of sluice gates, sump pumps, low lift and station roof.

- Masonry and Stone Rehabilitation – Springwells Plant \$8,985,000

This project involved the restoration of damaged masonry and lintels; repointing; masonry cleaning; sealer and waterproofing work; and painting and special coating. It also involved the removal of the existing roofing system and replacement with a new built-up roofing system on new roof insulation.

- Repair 54-Inch Main Appurtenances \$519,000

This project involved the replacing of pavement in various locations on the eastside of the City of Detroit by trimming existing pavement and

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removing and replacing approximately 14,470 square yards of temporary street pavement. The work included placing approximately eight hundred seventy tons of binder course mixture, and approximately 1,086 square feet of brick paving; removing and replacing approximately 41,502 square feet of temporary and permanent sidewalk, approximately one hundred thirty-five square feet of exposed aggregate, 19,368 square feet of temporary and permanent driveway, and replacing approximately 4,550 linear feet of curb. It also included the repair of one hundred ninety-three manhole structures and thirty-two gate boxes in Eight Mile Road between Southfield Road and Kelly Road.

- Westside Customer Service Center  
\$223,000

This project involved the purchase of land and building located at 15600 Grand River, Detroit. The purchase was necessitated when the owner of the previous Westside Customer Service Center, located at 17227 West Seven Mile Road, refused to renew the lease agreement. The property consists of three one-story buildings with parking in the rear to accommodate approximately 40 cars. In addition to providing customer service for Water and Sewerage customers, DWSD intends to offer space to other City Agencies such as Neighborhood City Hall or Mini Police Station to make the center accommodating to the area. This project was financed jointly by the Water Supply System and the Sewage Disposal System.

- Water Main Replacement – Virginia Park Estates Subdivision \$95,000

This project involved the removal of 600 linear feet (LF) of aged water mains located along the former Seward and

Delaware Avenues, which is currently the location of the new Virginia Park Estates Subdivision. The work also included installation of approximately 1500 LF of eight-inch water mains, five six-inch fire hydrants, two eight gate valves, two gate valve wells. Work was completed under City Engineering Department pavement contract (PW-6811).

### Fiscal Year 1996-97

- Reconstruction of East Section  
Baffle Wall-Lake Huron \$421,000

This project involved the emergency reconstruction of the Baffle Walls at the east suction well of Lake Huron Plant. It also involved the installation of a 14-inch bypass washwater line per contract document.

- Water Main Replacement – Various  
City Locations \$1,021,000

This project involved the replacement of existing 6-inch and 8-inch water mains in various streets throughout the City of Detroit with approximately 8,527 linear feet of City furnished 8-inch ductile iron water main. It also involved the furnishing and installation of approximately ninety-two feet of 16-inch diameter connections and related structures.

- Construction Management Services  
– Pumps & Valves \$7,484,000

This project involved providing construction management services for the repairs of specific pumping equipment at the Detroit Water & Sewerage Department's five water treatment plants, twenty unmanned water booster stations and fourteen unmanned sewage pumping stations. The specific pumping equipment included low-lift and high-lift pumps,

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line-pumps and reservoir pumps, sanitary storm pumps, associated valves and instrumentation/control apparatus. This project was jointly financed by the Water Supply System and the Sewage Disposal System.

- Water Main Replacement – Various City Locations \$950,000

This project involved the replacement of existing 6-inch and 8-inch pipe with approximately 4,390 linear feet of 8-inch ductile iron water main, and the replacement of existing 12-inch pipe with approximately 2,400 linear feet of 12-inch ductile iron water main, both with an 8 mil polyethylene wrap. The work also included replacement of approximately 570 feet of 16-inch diameter steel casing pipe for 8-inch ductile iron water main under the Consolidated Railroad and Norfolk Southern Railroad using the Jack and Boring Method.

- Water Works Park/Belle Isle Intake Building Renovation \$1,199,000

This project involved the demolition of interior and exterior wood enclosures and foundations, replacement of window units, equipment door, roof hatch, steel hatch frames and hatch covers. It also included the repair and replacement of interior and exterior masonry and stone, including tuck-pointing, testing, replacement of roof, gutter and downspout system components, and the replacement of electrical receptacles and interior lighting. It also included installation of new concrete hatches in bridge, replacement of trash racks and joints in walkways. The ceiling was cleaned and patched, steel trusses and related steel were blast cleaned and refinished. Five ton hoist runways were replaced and modifications were made to supports and cabinetwork. Gutter

heaters and a new power transformer was installed.

- Belle Isle/Water Works Park Intake Improvements \$1,161,000

This project involved the demolition of existing and construction of a new main entrance bridge to Belle Isle Intake Facility including approach road, fence, and gate. It also included repair of existing Intake Building Bridge, repair of concrete approach slabs and repainting of guardrail for the existing Refuse Outlet Bridge. The work also included the repair of the existing dike, including underwater grouting and slopes, realignment of erosion blocks and the filling of cavities. Removal and relocation of main electrical conduits and cables was also included in this project.

- Ceiling and Wall Renovation Water Board Building \$133,000

This project involved the purchase and installation of materials (ceiling tiles, cable trays, etc.) to renovate the ceilings and walls on the third, fourth, and seventh through twelfth floors of the Water Board Building. The renovation was done under a skilled maintenance contract. This project was jointly financed by the Water Supply System and the Sewage Disposal System.

- High Voltage Electrical System Modifications \$7,284,000

This project involved the rehabilitation of portions of the electrical infrastructure at the Springwells Water Treatment Plant by replacing two 10,000 KVA transformers and incoming feeder lines, replacing forty 4600 volt circuit breakers with vacuum units, related relays and controls. It also involved the installation of static exciters for twenty-four 4600-

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volt pump motors and the rehabilitation of switchgears and power busses. It also involved the installation of four 45 KVA grounding transformers and related demolition, including removal and disposal of four 45KVA PCB oil filled transformers and certain asbestos cable wrapping material and related work.

- 42-Inch Main – Macomb County Road Commission \$233,000

This project involved the installation, using open cut method, of eight hundred sixty feet of 42-inch water main at Twenty-three Mile Road and Fairchild Road. A 16-inch outlet with gate valve in well, to supply water to Chesterfield Township, was also installed. Work was completed under a Macomb County Road Commission Pavement Construction Contract. This work was originally planned as a portion of DWDS project, contract number WS-604, (installation of 42-inch water mains on Fairchild Road from Twenty-four Mile Road to Twenty-one Mile Road).

- Water Main Replacement – American Axle in Holbrook \$200,000

This project involved the replacement or abandonment of existing 6-inch to 8-inch water mains for American Axle in Holbrook, from Russell to St. Aubin in the City of Detroit, with approximately 2,040 linear feet of 12-inch ductile iron water main with polyethylene wrap, including all appurtenances and related structures.

- Automated Maintenance Work Order System \$847,000

This project involved providing detailed design and implementation of an automated work order system to improve the Maintenance and Repair Division's

ability to meet the needs of its customers. The Amendments provided for complete hardware and software installation, training, data loading, on-site testing, document preparation, and network coordination. The Water Supply System and the Sewage Disposal System jointly financed this project.

### Fiscal Year 1995-96

- Water System Improvements - Detroit Zoo \$970,000

This project involved the replacement or abandonment of existing 8-inch water main with approximately 5,579 linear feet of DWSD-furnished 12-inch ductile iron water main with polyethylene wrap including all appurtenances, connections and related structures; the installation of DWSD-furnished 12-inch gate valves; removing and replacing the existing 8-inch compound mechanical meter with an 8-inch sonic flow meter, sump pump, transmitter, recorder, pedestal, prewired control cabinet, switch and receptacle, and prewired circuit box and circuit breakers. The Zoological Park Department paid for this project.

- Water System Improvements - Various Streets \$878,000

This project involved the replacement of existing 6-inch and 8-inch water main in various streets throughout the City of Detroit with approximately 8,502 linear feet of 8-inch ductile iron water main with an 8 mil polyethylene wrap and approximately seventy-nine feet of 16-inch diameter steel casing pipe for 8-inch ductile iron water main under the Consolidated Railroad tracks by jack and boring method. The work included the connection of existing service connections and fire hydrants, gate valves and the connection of the new mains to existing mains in service. The

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work also included the installation of gate valves, gate boxes, construction of new gate wells, replacement of hydrants and all appurtenances, chlorinating and flushing new water mains, and removal and resetting of water meters on existing services, repairing of stop boxes and road or gate boxes, flushing existing services, restoration and cleanup.

- Water System Improvements  
\$990,000

This project involved the replacement of existing 6-inch and 8-inch water main in various streets throughout the City of Detroit with approximately 6,668 linear feet of 8-inch ductile iron water main with an 8-mil polyethylene wrap. The work included the connection of existing service connections and fire hydrants, gate valves and the connection of the new mains to existing mains in service. The work also included the installation of gate valves, gate boxes, construction of new gate wells, replacement of hydrants and all appurtenances, chlorinating and flushing new water mains, and removal and resetting of water meters on existing services, repairing of stop boxes and road or gate boxes, flushing existing services, restoration and cleanup.

- Radio Communication Facility and SCADA System \$1,061,000

This project involved the design, construction and start-up of a supervisory control and data acquisition (SCADA) system to be used in the control and/or monitoring of pumping activities at four remote sites from a control center located in the Water Board Building. The four remote sites included Southwest Plant and the Michigan Avenue, Wick Road, and Electric Avenue water pumping stations.

## **PROPOSED FIVE YEAR CAPITAL PLAN**

The capital improvement program for the Water Supply System (WSS) over the next five years, is devoted to rehabilitating and improving existing water treatment plants, pumping stations, system instrumentation, and master meter pits; replacing deteriorated water distribution mains in the City of Detroit; installing new mains or rerouting existing mains to accommodate new development in the Empowerment Zone and throughout the City of Detroit; automating the meter reading function; upgrading the instrumentation and process control equipment of the water transmission system; constructing additional transmission mains and pumping facilities in order to loop the transmission system and bring in more water to the service area from the Lake Huron Plant.

The WSS capital improvement program includes a number of projects to rehabilitate and improve aging facilities. The complete replacement of Water Works Park is a major project in the WSS capital program. Virtually every structure and piece of equipment is scheduled to be replaced or rehabilitated. Plans for Springwells Plant include rehabilitation of filter beds, the low voltage electrical system, chlorine system, high lift pumping system, boilers, masonry and stone structures, and building roofs. The Water Supply System is engaged in an ongoing program to replace distribution mains in the City of Detroit, which have a high maintenance history, with particular emphasis on areas of the city, such as the Empowerment Zone, which are undergoing redevelopment. Rehabilitation programs for pumping

## **WATER**

station reservoirs and system instrumentation are also planned.

The WSS capital improvement program includes a number of projects intended to provide a more reliable and increased water supply to the service area. Construction of a new 42-inch transmission main in the Chesterfield Township loop will provide more water to Macomb County customers and will have the capacity to provide water to additional communities in that area. Also planned is the construction of two new clearwells at the Lake Huron Water Treatment Plant (LHWTP). This project will provide for a maximum rated water production capacity of 400 million gallons per day which will provide DWSD with the ability to meet increased customer demands in the LHWTP service area.

The WSS capital improvement program includes a number of projects to take advantage of technology advances in the industry. A project currently underway is the water transmission system instrumentation, process control and computerization program. Also planned is the installation and implementation of automatic meter reading systems for the suburban master meters, commercial meters, and residential meters. Another major planned project is the design and construction of new ozone facilities at the Southwest, Northeast, Springwells and Lake Huron Plants. These facilities will be constructed to take advantage of the latest disinfection technology because the chlorination process currently in use has been discovered to be ineffective for inactivating the *Cryptosporidium* oocysts.

### **INTERDEPARTMENTAL CAPITAL RELATIONSHIPS**

Detroit Water and Sewerage Department has no current or proposed capital projects requiring input from other City Agencies at this time.

### **GOALS FOR CAPITAL IMPROVEMENT PROGRAM**

#### **Water Supply System (41)**

1. To provide essential, efficient and user-friendly services by:
  - a. Maintaining, improving, and/or replacing water plants, transmission and distribution mains and other facilities to ensure a safe and adequate water supply.
  - b. Continuing the water main replacement program aimed at reducing the number of main breaks and leaks in the City of Detroit, thereby improving service, increasing public safety, and lowering costs to Detroit customers.
  - c. Automating the meter reading process and rehabilitating the suburban wholesale meters and meter pits to more accurately measure and bill for water service provided.
  - d. Continuing to computerize various departmental functions to reduce costs and improve operations.
2. To obtain business growth and expansion by:
  - a. Constructing those additional mains, booster stations and reservoirs required to ensure an adequate water supply to all existing and new customers.

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### **RATIONALE FOR CAPITAL IMPROVEMENT PROGRAM**

By City Charter, the Detroit Water and Sewerage Department is charged with the responsibility of supplying water, sewage disposal and drainage services within and outside of the City of Detroit. The Department's water treatment, transmission, and distribution facilities and its sewage collection and treatment facilities must be constructed, improved, maintained and replaced in a manner consistent with proper water and sewerage works practices and must meet standards mandated by the Michigan Department of Environmental Quality, Michigan Department of Public Health, and the Environmental Protection Agency. Moreover, the Department must remain capable of meeting its contractual commitments to its customers.



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### **METRO AREA CONSTRUCTION**

The study, design and construction of new water transmission mains and major modifications to the existing water transmission system will ensure continued system integrity, improve system operations and provide additional contracted capacity. FY 2000-01- Budget- \$56,363,000- Balances, Cash and/or Revenue Bonds

|         |               |                                     |
|---------|---------------|-------------------------------------|
| 2001-02 | \$185,488,000 | Balances, Cash and/or Revenue Bonds |
| 2002-03 | \$ 10,609,000 | Balances, Cash and/or Revenue Bonds |
| 2003-04 | \$ 10,927,000 | Balances, Cash and/or Revenue Bonds |
| 2004-05 | \$ 11,255,000 | Balances, Cash and/or Revenue Bonds |

### **URBAN SYSTEM IMPROVEMENTS**

The study, design and construction of existing water main replacements includes all appurtenance, connections and related structures at various locations throughout the city. FY 2000-01- Budget- \$35,097,000- Balances, Cash and/or Revenue Bonds

|         |               |                                     |
|---------|---------------|-------------------------------------|
| 2001-02 | \$ 14,750,000 | Balances, Cash and/or Revenue Bonds |
| 2002-03 | \$ 25,695,000 | Balances, Cash and/or Revenue Bonds |
| 2003-04 | \$ 26,471,000 | Balances, Cash and/or Revenue Bonds |
| 2004-05 | \$ 27,012,000 | Balances, Cash and/or Revenue Bonds |

### **MAINTENANCE AND REPAIR**

This work consists of the study, design and construction of modifications to the department's maintenance and repair yards and service centers.

FY 2000-01- Budget- \$247,000- Balances, Cash and/or Revenue Bonds

### **MECHANICAL MAINTENANCE**

The purchase of major pieces of metering equipment, the study, design and construction of modifications to the existing water metering facilities, and the development of an automatic metering system are included in this category. This category also includes projects for the rebuilding or replacement of major pieces of mechanical equipment, and improvements to the Water Board Building.

FY 2000-01- Budget- \$35,960,000- Balances, Cash and/or Revenue Bonds

|         |              |                                     |
|---------|--------------|-------------------------------------|
| 2001-02 | \$74,418,000 | Balances, Cash and/or Revenue Bonds |
|---------|--------------|-------------------------------------|

### **Computer Systems**

Department efficiency and effectiveness will be enhanced by new computerized instrumentation and control systems for the Water Transmission System. Also included in the program are a computerized maintenance work order system, technical assistance for an information system/management information system, an accounting, billing, and financial information system, computer and local area network installation, and telephone and telecommunications improvements and an 821 MHz Trunking System. FY 2000-01- Budget- \$104,707,000- Balances, Cash and/or Revenue Bonds

|         |               |                                     |
|---------|---------------|-------------------------------------|
| 2001-02 | \$ 22,583,000 | Balances, Cash and/or Revenue Bonds |
|---------|---------------|-------------------------------------|

## **WATER**

|         |               |                                     |
|---------|---------------|-------------------------------------|
| 2002-03 | \$ 65,325,000 | Balances, Cash and/or Revenue Bonds |
| 2003-04 | \$ 820,000    | Balances, Cash and/or Revenue Bonds |
| 2004-05 | \$ 844,000    | Balances, Cash and/or Revenue Bonds |
| 2005-06 | \$ 869,000    | Balances, Cash and/or Revenue Bonds |

### **Plant Replacement And Renovation - General Plant**

Projects include water system instrumentation rehabilitation, which involves renovation of pumps, valves, motors and electrical power distribution equipment for the water plants and pumping stations. Also included is installation of flow measurement devices at all Water Treatment Plants and Booster Pumping Stations, security systems for the Water Treatment Plants, emergency roof repair and maintenance, and an alum sludge removal and disposal study.

FY 2000-01- Budget- \$56,342,000- Balances, Cash and/or Revenue Bonds

|         |               |                                     |
|---------|---------------|-------------------------------------|
| 2001-02 | \$ 29,304,000 | Balances, Cash and/or Revenue Bonds |
| 2002-03 | \$ 212,000    | Balances, Cash and/or Revenue Bonds |
| 2003-04 | \$ 219,000    | Balances, Cash and/or Revenue Bonds |
| 2004-05 | \$ 225,000    | Balances, Cash and/or Revenue Bonds |
| 2005-06 | \$ 232,000    | Balances, Cash and/or Revenue Bonds |

### **Water Works Park Plant**

Planned work includes completing the construction of a new Water Works Park II Water Treatment Plant. Also included is rehabilitation of the Belle Isle Pump Station Facilities, Rehabilitation of Water Works Park Historical Buildings and Rehabilitation of the Raw Water Booster Station.

FY 2000-01- Budget- \$209,903,000- Balances, Cash and/or Revenue Bonds

|         |              |                                     |
|---------|--------------|-------------------------------------|
| 2001-02 | \$ 515,000   | Balances, Cash and/or Revenue Bonds |
| 2002-03 | \$ 1,591,000 | Balances, Cash and/or Revenue Bonds |

## **SPRINGWELLS WATER PLANT**

Projects include masonry, stone and roof repairs, low voltage electrical system modifications, rehabilitation of twenty-six filter beds, rehabilitation of carbon and alum feed systems, and replacement of flocculator.

FY 2000-01- Budget- \$47,790,000- Balances, Cash and/or Revenue Bonds

|         |               |                                     |
|---------|---------------|-------------------------------------|
| 2001-02 | \$ 20,600,000 | Balances, Cash and/or Revenue Bonds |
| 2002-03 | \$ 265,000    | Balances, Cash and/or Revenue Bonds |
| 2003-04 | \$ 8,141,000  | Balances, Cash and/or Revenue Bonds |
| 2004-05 | \$ 88,240,000 | Balances, Cash and/or Revenue Bonds |

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### **Northeast Water Plant**

Projects include the design and construction of chlorine storage building addition, and the installation of filtered water conduit. FY 2000-01- Budget- \$8,963,000- Balances, Cash or Revenue Bonds

|         |               |                                     |
|---------|---------------|-------------------------------------|
| 2001-02 | \$ 18,025,000 | Balances, Cash and/or Revenue Bonds |
| 2003-04 | \$ 3,278,000  | Balances, Cash and/or Revenue Bonds |
| 2003-04 | \$ 37,142,000 | Balances, Cash and/or Revenue Bonds |

### **Southwest Plant**

Work includes the design and construction of raw water tunnel access shaft, modifications of reservoir, and water intake improvement and rehabilitation. FY 2000-01- Budget- \$20,811,000- Balances, Cash and/or Revenue Bonds

|         |              |                                     |
|---------|--------------|-------------------------------------|
| 2003-04 | \$29,504,000 | Balances, Cash and/or Revenue Bonds |
|---------|--------------|-------------------------------------|

### **Lake Huron Water Plant**

Projects include the design and construction of supply improvements, raw water intake improvements, high lift pumping improvements, retrofit of 15 KV switchgear, water treatment plant filtration improvements, and pretreatment and field control modifications. Work also included the design and construction of oversight waste washwater and sludge disposal at Lake Huron, Southwest, Northeast and Springwells plants, the construction of New Clearwell plant, and improvements to existing clearwells and suction wells. FY 2000-01- Budget- \$34,382,000- Balances, Cash and/or Revenue Bonds

|         |              |                                     |
|---------|--------------|-------------------------------------|
| 2001-02 | \$ 3,013,000 | Balances, Cash and/or Revenue Bonds |
| 2002-03 | \$ 1,061,000 | Balances, Cash and/or Revenue Bonds |
| 2003-04 | \$ 3,606,000 | Balances, Cash and/or Revenue Bonds |
| 2004-05 | \$41,306,000 | Balances, Cash and/or Revenue Bonds |

## **PUMPING STATIONS AND RESERVOIRS**

Projects include structural rehabilitation of reservoirs at several pumping stations, replacement of equipment at W. Chicago, Electric, Farmington, Michigan and Roseville booster stations, and remediation of underground storage tank problems where needed. Also included are the following projects: rehabilitation of North Service Center including reservoir, additional pump at Franklin Station, rehabilitation of Franklin Station including\* reservoir, additional pumps at Imlay Station, and rehabilitation of Imlay Station. FY 2000-01- Budget- \$69,824,000- Balances, Cash and/or Revenue Bonds

|         |               |                                     |
|---------|---------------|-------------------------------------|
| 2001-02 | \$ 32,085,000 | Balances, Cash and/or Revenue Bonds |
| 2002-03 | \$ 1,326,000  | Balances, Cash and/or Revenue Bonds |
| 2003-04 | \$ 6,447,000  | Balances, Cash and/or Revenue Bonds |
| 2004-05 | \$ 788,000    | Balances, Cash and/or Revenue Bonds |
| 2005-06 | \$ 2,898,000  | Balances, Cash and/or Revenue Bonds |

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(000's OMITTED)

| Projects                              | Project<br>Status | Project<br>Timeline | Impact<br>on Budget | Funding<br>Source | Authorized<br>Unissued | (Budget)<br>2000-01 | ***** 5 Year Capital Plan ***** |           |          |           |         | Unprogrammed |
|---------------------------------------|-------------------|---------------------|---------------------|-------------------|------------------------|---------------------|---------------------------------|-----------|----------|-----------|---------|--------------|
|                                       |                   |                     |                     |                   |                        | 2000-01             | 2001-02                         | 2002-03   | 2003-04  | 2004-05   | 2005-06 |              |
| Metro Area Construction (MAC)         |                   |                     |                     | R.S.              |                        | \$58,363            | \$185,488                       | \$10,609  | \$10,927 | \$11,255  |         |              |
| Urban System Improvements (USI)       |                   |                     |                     | R.S.              |                        | 35,097              | 14,750                          | 25,695    | 26,471   | 27,012    |         |              |
| Maintenance and Repair                |                   |                     |                     | R.S.              |                        | 247                 |                                 |           |          |           |         |              |
| Mechanical Maintenance (MM)           |                   |                     |                     | R.S.              |                        | 35,960              | 74,418                          |           |          |           |         |              |
| Computer Systems (CS)                 |                   |                     |                     | R.S.              |                        | 104,707             | 22,583                          | 65,325    | 820      | 844       | \$869   |              |
| Plant Renovation & Replacemnet        |                   |                     |                     |                   |                        |                     |                                 |           |          |           |         |              |
| General Plant (GP)                    |                   |                     |                     | R.S.              |                        | 56,342              | 29,304                          | 212       | 219      | 225       | 232     |              |
| Water Works Park (WWP)                |                   |                     |                     | R.S.              |                        | 209,903             | 515                             | 1,591     |          |           |         |              |
| Springwells (SP)                      |                   |                     |                     | R.S.              |                        | 47,790              | 20,600                          | 265       | 8,141    | 88,240    |         |              |
| Northeast (NE)                        |                   |                     |                     | R.S.              |                        | 8,963               | 18,025                          |           | 3,278    | 37,142    |         |              |
| Southwest (SW)                        |                   |                     |                     | R.S.              |                        | 20,811              |                                 |           | 29,504   |           |         |              |
| Lake Huron (LH)                       |                   |                     |                     | R.S.              |                        | 34,382              | 3,013                           | 1,061     | 3,606    | 41,306    |         |              |
| Pumping Stations and Reservoirs (PSR) |                   |                     |                     | R.S.              |                        | 69,824              | 32,085                          | 1,326     | 6,447    | 788       | 2,898   |              |
| TOTALS                                |                   |                     |                     |                   | \$0                    | \$682,389           | \$400,781                       | \$106,084 | \$89,413 | \$206,812 | \$3,999 | \$0          |

### Funding Source Summary:

|                   |      |           |           |           |          |           |         |     |
|-------------------|------|-----------|-----------|-----------|----------|-----------|---------|-----|
| Revenue Supported | R.S. | \$682,389 | \$400,781 | \$106,084 | \$89,413 | \$206,812 | \$3,999 | \$0 |
|-------------------|------|-----------|-----------|-----------|----------|-----------|---------|-----|

Note: see 'high priority projects' in narrative section for `project status, project timeline and impact on budget statements'

\* PROJECT STATUS: M=project is maintaining current infrastructure; N=Project will result in new development

\*\* PROJECT TIMELINE: P=project is proposed; O=project is ongoing; U=project is one time and underway

\*\*\* IMPACT ON OPERATING BUDGET: AF=additional funding required; RF=results in reduction of funding; NOI=no operating impact

\*\*\* IMPACT ON STAFFING BUDGET: AS=additional staffing required; RS=results in reduction of staffing; NSI=no staffing impact

## WATER

### Summary Of Water Supply System Highest Priority Projects

| Project Category   | Projected Cost     |
|--|--------------------|
| <b>Metro Area Construction (MAC):</b> projects involving the construction or replacement of water mains, pump stations and reservoirs outside of the City of Detroit   | \$ 59,084,000      |
| <b>Urban System Improvements (USI):</b> projects involving the construction or replacement of water mains inside of the City of Detroit  | 121,367,000        |
| <b>Mechanical Maintenance (MM):</b> projects relating to the purchase of major metering equipment, development/ construction/ rehabilitation of water metering facilities, and rebuilding of major pumps, motors, and valves | 105,388,000        |
| <b>Computer Systems (CS):</b> projects involving computerized instrumentation and control systems  | 116,748,000        |
| <b><u>Plant Renovation and Replacement:</u></b> rehabilitation and improvement projects related to the following:  |                    |
| <b>General Plant (GP)</b> - projects common to all or a number of water plants and/or pumping stations   | 27,446,000         |
| <b>Water Works Park (WWP)</b> – rehabilitation and/or renovation work at Water Works Park Plant  | 208,018,000        |
| <b>Springwells Plant (SP)</b> – rehabilitation and/or Renovation work at Springwells Water Plant   | 66,320,000         |
| <b>Northeast Plant (NE)</b> – rehabilitation and/or renovation work at Northeast Plant   | 22,669,000         |
| <b>Southwest Plant (SW)</b> – rehabilitation and/or renovation work at Southwest Plant   | 19,486,000         |
| <b>Lake Huron (LH)</b> – rehabilitation and/or renovation work at Lake Huron Water Plant   | 31,313,000         |
| <b>Pumping Stations and Reservoirs (PSR)</b> – rehabilitation and/or Renovation work at various reservoirs pumping stations  | 93,247,000         |
| <b>Water Supply System Highest Priority Projects – Total</b>   | <b>871,086,000</b> |

## WATER SUPPLY SYSTEM HIGH PRIORITY PROJECTS

The water supply system capital improvement program schedules are presented in the Capital Agenda according to major program categories because individual projects would be numerous to include separately. The most important projects for each program

### High Priority Projects - Water Supply System

| Project   | Project<br>Status* | Project<br>Time<br>Line** | Impact<br>on<br>Budget*** | Program<br>Category | Project<br>Phase**** | Fiscal<br>Year | Amount                       |
|---|--------------------|---------------------------|---------------------------|---------------------|----------------------|----------------|------------------------------|
| 42" Water Main from Decker Rd to Beck Rd in 14 Mile               | N                  | U                         | RF/NSI                    | MAC                 | C                    | 2001           | \$ 5,090,000                 |
| 42" Water Main from 21 Mile Rd.to H.B. Joy Rd.                    | N                  | U                         | RF/NSI                    | MAC                 | C                    | 2001           | 5,500,000                    |
| 42" Water Main from H. B. Joy Rd. to Metro Parkway                | N                  | U                         | RF/NSI                    | MAC                 | C                    | 2001           | 6,800,000                    |
| Comprehensive Water Master Plan                                   | N                  | U                         | NOI/NSI                   | MAC                 | S                    | 2001           | 5,955,000                    |
| City of Detroit Hydraulic and Water Quality Model                 | N                  | U                         | RF/NSI                    | MAC                 | S                    | 2001           | 4,200,000                    |
| Haggerty Booster Pumping Station                                  | N                  | U                         | RF/NSI                    | MAC                 | D/C                  | 2001           | 13,455,000                   |
| 96" Main Relocation - 24 Mile Rd. and Dequindre                   | N                  | U                         | AF/NSI                    | MAC                 | S/D                  | 2001           | 177,000                      |
| 96" Main Relocation - 24 Mile Rd. and Dequindre                   | N                  | P                         | AF/NSI                    | MAC                 | C                    | 2002           | <u>17,907,000</u>            |
| <b>Subtotal - Metro Area Construction</b>                         |                    |                           |                           |                     |                      |                | <b><u>\$ 59,084,000</u></b>  |
| Water Main Replacement - City of Detroit                          | M                  | O                         | RF/NSI                    | USI                 | C                    | 2001           | \$ 31,662,000                |
| Water Main Replacement - City of Detroit                          | M                  | O                         | RF/NSI                    | USI                 | C                    | 2002           | 10,527,000                   |
| Water Main Replacement - City of Detroit                          | M                  | O                         | RF/NSI                    | USI                 | C                    | 2003           | 25,695,000                   |
| Water Main Replacement - City of Detroit                          | M                  | O                         | RF/NSI                    | USI                 | C                    | 2004           | 26,471,000                   |
| Water Main Replacement - City of Detroit                          | M                  | O                         | RF/NSI                    | USI                 | C                    | 2005           | <u>27,012,000</u>            |
| <b>Subtotal - Urban System Improvements</b>                       |                    |                           |                           |                     |                      |                | <b><u>\$ 121,367,000</u></b> |
| Suburban Water Meters Automation & Replacement                    | M                  | U                         | RF/NSI                    | MM                  | C                    | 2001           | \$ 12,000,000                |
| City of Detroit Commercial/Industrial Water Meter Replacement and | M/N                | U                         | RF/NSI                    | MM                  | D/C                  | 2001           | 20,000,000                   |

|   |   |   |         |     |     |      |                              |
|---|---|---|---------|-----|-----|------|------------------------------|
| Automatic Meter Reading for City of Detroit Residential Customers | N | P | AF/NSI  | MM  | D/C | 2002 | 51,500,000                   |
| Main Office Building - Office Relocation                          | N | P | AF/NSI  | MM  | D/C | 2002 | <u>21,888,000</u>            |
| <b>Subtotal - Mechanical Maintenance</b>                          |   |   |         |     |     |      | <b><u>\$ 105,388,000</u></b> |
| Department-wide Oracle License                                    | M | O | AF/NSI  | CS  | D/C | 2001 | \$ 6,037,000                 |
| DRMS - Department-wide FAMIS Replacement                          | M | U | AF/NSI  | CS  | D/C | 2001 | 8,000,000                    |
| 821 Mhz Trunked Radio System                                      | N | U | AF/NSI  | CS  | S/D | 2001 | 500,000                      |
| 821 Mhz Trunked Radio System                                      | N | P | AF/NSI  | CS  | C   | 2003 | 32,570,000                   |
| Customer Billing System   | N | U | NOI/NSI | CS  | D/C | 2001 | 2,950,000                    |
| Instrumentation, Control & Computer System Program - Water        | N | U | AF/NSI  | CS  | D/C | 2001 | <u>66,691,000</u>            |
| <b>Subtotal - Computer Systems</b>                                |   |   |         |     |     |      | <b><u>\$ 116,748,000</u></b> |
| Water System Instrumentation Rehabilitation Project               | M | U | RF/NSI  | GP  | C   | 2001 | \$ 7,532,000                 |
| Analytical Clean Lab Facility and Additional Parking at IWC       | N | U | AF/NSI  | GP  | D/C | 2001 | 260,000                      |
| Flow Measurement at Water Treatment Plants & Booster Stations     | N | U | AF/NSI  | GP  | S   | 2001 | 84,000                       |
| Flow Measurement at Water Treatment Plants & Booster Stations     | N | P | AF/NSI  | GP  | D/C | 2002 | 14,935,000                   |
| Phase II of Electronic Security System for Water & Sewerage       | N | P | AF/NSI  | GP  | D/C | 2002 | <u>4,635,000</u>             |
| <b>Subtotal - General Plant</b>                                   |   |   |         |     |     |      | <b><u>\$ 27,446,000</u></b>  |
| Screen House Building Rehabilitation                              | M | P | RF/NSI  | WWP | D   | 2001 | \$ 233,000                   |
| Screen House Building Rehabilitation                              | M | P | RF/NSI  | WWP | C   | 2001 | 5,000,000                    |
| Water Works Parks II 200 MGD Water Treatment                      | N | U | RF/NSI  | WWP | D/C | 2001 | <u>202,785,000</u>           |
| <b>Subtotal - Water Works Park</b>                                |   |   |         |     |     |      | <b><u>\$ 208,018,000</u></b> |
| Low Voltage Rehabilitation - Springwells                          | M | U | RF/NSI  | SP  | C   | 2001 | \$ 13,220,000                |
| Filter Rehabilitation Phase II - Springwells                      | M | U | RF/NSI  | SP  | C   | 2001 | 26,500,000                   |
| Rehabilitate Carbon and Alum Feed Systems - Springwells           | M | U | RF/NSI  | SP  | C   | 2001 | 6,000,000                    |



|   |   |   |        |     |     |      |                             |
|---|---|---|--------|-----|-----|------|-----------------------------|
| Sludge Treatment and Waste Washwater Treatment Facilities           | N | P | RF/NSI | SP  | D/C | 2002 | <u>20,600,000</u>           |
| <b>Subtotal - Springwells</b>                                       |   |   |        |     |     |      | <b><u>\$ 66,320,000</u></b> |
| Chlorine Storage Building Addition                                  | N | U | AF/NSI | NE  | C   | 2001 | \$ 5,159,000                |
| Sludge Treatment and Waste Washwater Treatment Facilities           | N | P | AF/NSI | NE  | D/C | 2002 | <u>17,510,000</u>           |
| <b>Subtotal - Northeast</b>   |   |   |        |     |     |      | <b><u>\$ 22,669,000</u></b> |
| Raw Water Tunnel Access Shafts at Springwells and Southwest         | M | U | RF/NSI | SW  | D   | 2001 | \$ 9,000                    |
| Raw Water Tunnel Access Shafts at Springwells and Southwest         | M | U | RF/NSI | SW  | C   | 2001 | 2,477,000                   |
| Sludge Treatment and Waste Washwater Treatment Facilities           | N | U | AF/NSI | SW  | D/C | 2001 | <u>17,000,000</u>           |
| <b>Subtotal - Southwest</b>   |   |   |        |     |     |      | <b><u>\$ 19,486,000</u></b> |
| Lake Huron Intake Improvements                                      | N | U | RF/NSI | LH  | D   | 2001 | \$ 692,000                  |
| Lake Huron Intake Improvements                                      | N | U | RF/NSI | LH  | C   | 2001 | 488,000                     |
| Sludge Treatment and Waste Washwater Treatment Facilities           | N | U | RF/NSI | LH  | D/C | 2001 | 7,000,000                   |
| Oversight of Waste Washwater and Sludge Disposal at Lake Huron,     | N | U | RF/NSI | LH  | D   | 2001 | 6,630,000                   |
| Lake Huron Water Treatment Plant Filtration Capacity Improvemen     | M | O | RF/NSI | LH  | C   | 2001 | 7,000,000                   |
| New Clearwell   | N | U | AF/NSI | LH  | D/C | 2001 | <u>9,503,000</u>            |
| <b>Subtotal - Lake Huron</b>  |   |   |        |     |     |      | <b><u>\$ 31,313,000</u></b> |
| Replacement of Equipment at W. Chicago, Electric, Farmington, M     | M | U | RF/NSI | PSR | D/C | 2001 | \$ 2,561,000                |
| Imlay Station Improvements  | M | O | RF/NSI | PSR | C   | 2001 | 14,243,000                  |
| Reservoir Inspection and Repair Program                             | M | O | AF/NSI | PSR | D/C | 2001 | 42,840,000                  |
| Franklin Pumping Station Improvements                               | M | O | RF/NSI | PSR | C   | 2001 | 3,063,000                   |
| Installation of Back-up Generators at Franklin and Schoolcraft Wate | N | P | AF/NSI | PSR | C   | 2002 | 17,510,000                  |
| Romeo Pumping Station   | N | P | AF/NSI | PSR | D   | 2002 | 515,000                     |
| Romeo Pumping Station   | N | P | AF/NSI | PSR | C   | 2002 | <u>12,515,000</u>           |

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|   |                      |
|---|----------------------|
| <b>Subtotal - Pumping Stations and Reservoirs</b> | <b>\$ 93,247,000</b> |
|---|----------------------|

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|                               |                       |
|-------------------------------|-----------------------|
| <b>Total - All Categories</b> | <b>\$ 871,086,000</b> |
|-------------------------------|-----------------------|

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**Legend**

\*Project Status: M=project is maintaining current infrastructure; N=project will result in new development

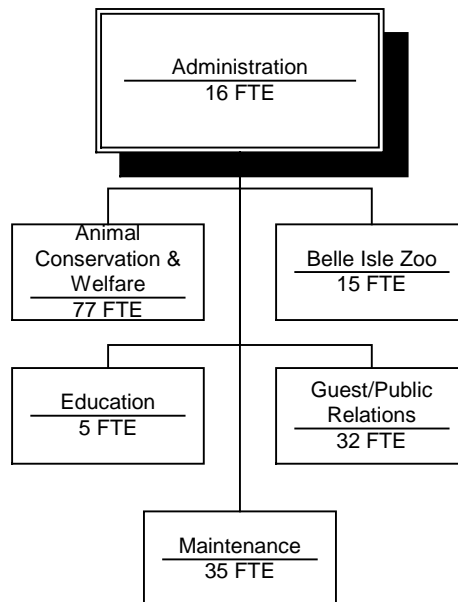
\*\*Project Time Line: P=project is proposed; O=project is ongoing; U=project is one time only and is underway

\*\*\*Impact on Operating Budget: AF=additional funding required; RF=results in reduction of funding; NOI=no operating impact

\*\*\*Impact on Staffing Budget: AS=additional staffing required; RS=results in reduction of staffing; NSI=no staffing impact

\*\*\*\*Project Phase: S=design; D=design; C=construction

# ZOOLOGICAL INSTITUTE



## **AGENCY MISSION**

The mission of the Detroit Zoological Institute (DZI) is to provide the City and the region with a unique world-class recreation, educational and zoological resource.

The Zoological Institute is “Celebrating and Saving Wildlife”

Agency goals are:

- Demonstrating leadership in wildlife conservation and animal welfare.
- Providing a broad audience with outstanding and unique educational opportunities that lead to the appreciation and stewardship of nature.
- Inspiring our community with engaging, meaningful and memorable experiences.
- Providing innovative zoological facilities that contribute to the region’s economic vitality.
- Demonstrating organizational excellence consistent with a commitment to outstanding service and progressive resource management.

## **CURRENT FACILITIES**

The Detroit Zoological Institute is composed of three facilities: the Detroit Zoo, the Belle Isle Zoo and the Belle Isle Aquarium.

### **Detroit Zoo**

The Detroit Zoo, opened to the public in 1928, is the largest component of the Detroit Zoological Institute. It consists of 125 acres located approximately 12 miles northwest of Downtown Detroit, just north of I-696 and west of Woodward, in Royal Oak.

Built in the 1920’s and 30’s, the Detroit Zoo is noted as the first zoo in the United States to use barless exhibits

extensively, reflecting its design by Carl Hagenback, generally recognized as the most important historical influence on modern zoo design. The Zoo is a natural habitat for more than 2,400 animals and 700 varieties of trees, shrubbery and flowering plants.

In the last twenty-three (23) years, three major new exhibits have been built and opened to the public. The Wildlife Interpretive Gallery opened in 1995. The Chimpanzee of Harambee opened in 1989 (in April 1996 Gorillas returned to the Zoo for the first time in fifteen years, and this complex was renamed Great Apes of Harambee.) In 1977 the Free-flight Aviary opened. Other major exhibits include the Penguinarium, Holden Museum of Living Reptiles and Amphibians, the South American Pampas, African Swamp, Barnyard, Snow Monkeys, Prairie Dogs (renovated in 1999), Bear Dens, Wolverines, Kangaroos, Giraffes, Siberian Tigers, African Lions, Seals and Sea Lions, Hippopotamus, Elephants and Rhinoceros, Grevy’s Zebras, Bactrian Camels, Scimitar-horned Oryxes, Mandrill Baboon, Otters and a variety of other endangered species.

Among the Zoo’s many features are the much-photographed Rackham Memorial Fountain, the popular Miniature Railroad (presented in 1931 by the Detroit News and last renovated in 1984), tractor-train-narrated tours and an extensive wayfinding signage and interpretive graphic system designed to educate our visitors.

A new front entrance, provided through Michigan State Highway funding during the construction of I-696, was opened in 1986 and included a four-story parking garage, which expanded total parking capacity to over 2,000 spaces.

## DETROIT ZOOLOGICAL INSTITUTE

Support facilities include nine (9) refreshments, four (4) souvenir stands, seven (7) service buildings (including the animal hospital and quarantine areas) and two (2) railroad stations.

### **Belle Isle Zoo**

The Belle Isle Zoo is located on Belle Isle, Detroit's beautiful island park on the Detroit River. This modest zoo is situated on 13 acres in the center of the island's 982 acres, between Central and Tanglewood Streets.

The Belle Isle Zoo, originally a petting zoo for children, was reopened in 1980, featuring a  $\frac{3}{4}$  mile long elevated boardwalk which allows visitors to look down into the animal enclosures. The Belle Isle Zoo exhibits include; Mexican and Maned Wolves, African Lions, Buffalo, Yak, Alpaca and Emu. There are 241 animals on exhibit, representing 74 species.

The entrance presents an inviting, airy appearance with eye-catching decorative banners on display.

### **Belle Isle Aquarium**

The Aquarium on Belle Isle is the nation's oldest freshwater public aquarium, having opened in 1904. It was rehabilitated in 1955 and is open throughout the year. The Aquarium is well known among visitors for its freshwater stingray and electric eel exhibits.

There are over 60 exhibits with a total capacity of 32,000 gallons, holding over 1,300 individuals representing 146 species.

### **FIVE YEAR HISTORY**

In the past five years, \$16,687,000 in total capital funds was appropriated for a variety of renovation and new

construction projects. This funding was devoted to the following:

- Mandrills- a colorful species of primates, were reintroduced to the Detroit Zoo in May 1994. Private funding in the amount of \$243,000 demolished the barred, cement exhibit, which formerly housed leopards and created attractive grassy quarters complete with a waterfall.
- Belle Isle Zoo/Lion Exhibit – In September 1994 a new exhibit opened at the Belle Isle Zoo featuring African Lions. \$800,000 in funding was provided from the sale of general obligation bonds.
- Giraffe Exhibit - Winter viewing of giraffes, consistent with our goal of making the Detroit Zoo an all-season attraction, opened in November 1994. Private funds in the amount of \$170,000 added glassed viewing under a wood pergola, improved drainage, provided flooring in the animal areas and restoration of the terrazzo flooring in the visitor area.
- Penguinarium – Also in 1994, \$138,000 was spent on the installation of a new HVAC system at the Penguinarium, improvements to animal holding areas and the replacement of etched glass, which restricted public viewing of the animals. These funds were provided by a \$116,000 bequest to the City of Detroit from the Fred Major Fund and supplemental funding through private funds.
- Water Main – Installation of a new 12" water main along the boundary line of the Detroit Zoo was completed in 1994. Final cost was \$1,057,000 from general obligation bonds.
- Fencing/Roofing/Reptile House – General obligation bonds (\$100,000) provided new perimeter fencing along Huntington Road, old

## DETROIT ZOOLOGICAL INSTITUTE

greenhouse structures were demolished and new greenhouses erected (\$115,000). The Reptile House skylights were replaced (\$33,000) and the Penguinarium roof was replaced (\$33,000).

- African Veldt – Private funds in the amount of 113,000 provided renovations to the African Veldt in June 1995. The project reconfigured the former zebra yard, simulating native African Grasslands and renovated the night quarters for exhibits of African species.
- Wildlife Interpretive Gallery – The historic Birdhouse was renovated to create the Wildlife Interpretive Gallery, which opened to the public on December 14, 1995. This \$9 million project provides a facility for informal public education featuring high-tech interactive exhibits, an interpretive film theatre, a permanent wildlife art collection and exchanging exhibit gallery, a coral reef aquarium, and a butterfly and a hummingbird garden. Private funds provided \$1.8 million of this project. The project was accomplished in three phases: (1) separation of the Birdhouse from the free flight aviary and exterior stabilization, (2) interior construction, and (3) the final phase involving interior equipment and furnishings. In conjunction with this construction, the adjoining free-flight aviary was renovated.
- Holden Museum of Living Reptiles – In February 1996, serious structural deterioration was discovered in the laminated wood arches supporting the roof of the Holden Museum of Living Reptiles and Amphibians. The building was immediately closed to the public and emergency capital repairs totaling \$210,000 were completed.
- African Bird Exhibit/Winter Holding Facility – This substandard winter housing facility for flamingos, spoonbills, Stanley and crowned cranes, secretary birds, and hooded vultures was demolished. A new winter building providing outdoor access to birds on warm winters days was completed November 1996, with \$650,000 in general obligation bonds.
- Administration Building Parking/Handicap Access – By December 1996, a new visitor parking area for the Administration Building was completed. This project provides for handicap accessibility to and within the Detroit Zoo Administration Building. Included in this project is a barrier-free restroom. The total cost was \$195,000 from general obligation bonds.
- Snow Monkey Renovations – In fall of 1996 alterations began to modernize the animal holding areas and add hot tubs, natural substrates, natural climbing structures, an a swimming pool. This project was completed in February of 1977 was significant gunite repairs were completed in February, 1979, utilizing \$200,000 of general obligation bond funds
- Small Mammal Buildings (Two) – (1996-1997) Projects include the gutting of winter holding facilities and replacing the barred enclosure. Electrical and HVAC systems were updated and the food preparation area was replaced. The renovations include the construction of summer exhibition areas for small primates. Cost \$380,000.
- Gunite Repair – (1996-1997) ``This project involves ongoing repair of cracked exhibit gunite to comply with USDA regulations. Project cost

## DETROIT ZOOLOGICAL INSTITUTE

of \$200,00 was funded with general obligation bonds.

- North American River Otter Exhibit- Completed in 1997, these renovations incorporate underwater viewing and off-exhibit holding with the potential for breeding. This project was completed with \$750,000 in private funds.
- Playscape Phase I – Completed in 1997, this exhibit has added a relaxing outlet to the park intended for children six through twelve and their parents. This project was funded by private funds in the amount of \$150,000.
- Electrical/Lighting Improvements - An important part of this project consists of design work to increase electrical and other lighting capacity throughout the park for extended public hours and off-season events. General obligation bonds, in the amount of \$500,000 was allocated to this project, which was completed in June 1997.
- Belle Isle Zoo Animal Holding Areas – As a result of this project, heated, indoor holding areas now provide improved husbandry for deer, addax, zebra, antelope, tapirs and guanacos. This project was completed in August 1997 at a cost of \$300,000 from general obligation bonds.
- Free Light Aviary – (1997-1998) The installation of hot water fin-tub radiators improved the heating system. This project was funded with \$750,000 private funding.
- Boiler Replacement – (1997-1998) New boilers were installed in both the Administration Building and in the Giraffe House. Funded by general obligation bonds - \$100,000
- Miniature Railroad Renovation – (1997-1998) The miniature railroad, which had not received significant

major repairs since the early 1980's, required replacements of wheels, drive rods, trucks and coaches. This Detroit Zoo attraction remains wildly popular with our visitors. Funded by general obligation bonds - \$300,000.

- Playscape – Phase II - \$200,000 was donated in private funds for this project. In its final phase in 1999 the amount spent to date was \$87,000. This project provided a play area more appropriate for supervised young children ages two through five.
- National Amphibian Conservation Center- A new building for conservation and public exhibit of endangered amphibian species. Interpretive graphics highlighting the diversity of amphibian life are featured. No other center like this exists in North America. This exhibit building opened to the public in June 2000. Funded with \$4,100,000 in private funds.

The expenditure of capital funds to construct new and exciting zoo exhibits and to maintain the facilities in good repair has had a marked effect on attendance and revenue levels. In the prior 5-year period (1990-1995) attendance averaged 800,000 visitors. During this 5-year period attendance peaked at approximately 1,200,000 by the end of 1999.

### **PROPOSED FIVE YEAR CAPITAL PLAN**

The plan for the Detroit Zoological Institute for the next five years is a mix of projects addressing renovation and infrastructure needs, providing new development to improve conservation efforts and creating new experiences for the visiting public.

## DETROIT ZOOLOGICAL INSTITUTE

The current five year capital plan includes public funding through the sale of general obligation bonds, private funding and state grants. Allocations for our new projects total \$27,800,000 for the period 2002-2006.

The current year budget, 2000-01, totals \$12,600,000. \$4,800,000 is allocated for the Arctic Ring of Life (ARL). This 4.2 acre exhibit will be the largest arctic exhibit in the country. The naturalistic habitat will incorporate distinct polar environments for polar bears, snowy owls and arctic foxes.

\$7,100,000 is allocated for the new Education Center. The Education Center will host a variety of education opportunities for the casual visitor, and students of all grade levels. Furthermore, through the use of distance learning, we will be able to take the DZI well beyond its physical borders to a worldwide audience.

\$3,300,000 is allocated for our new Veterinary Hospital. DZI will open this facility in an effort to provide state-of-the-art animal care.

\$100,000 is allocated to replace the old wooden climbing structures in the Great ape Dayroom with artificial trees and vines and to add sleeping platforms.

\$2,150,000 is allocated to renovate the Institute's public restroom facilities and to construct new facilities. This is particularly important since current facilities are insufficient and since the Institute is anticipating increased attendance with the first full season of operation of the National Amphibian Conservation Center (NACC) and the Arctic Ring of Life (ARL). The current 2.5 hour average visit will increase by at least 1.4 hours, both of these factors

necessitate the addition of certain facilities.

\$1,300,000 allocated to the Chimp Moat will improve the appearance, safety, and management capabilities of the Chimp Exhibit.

\$1,500,000 in Gunite replacement and repair is required by USDA standards

\$1,000,000 for roof repairs to exhibits will provide more durable and lasting roof repairs for many of the exhibit buildings and the Administrative Complex roof repairs for many of the exhibit buildings and the Administrative Complex.

\$1,600,000 will be used to repair roadways and walkways and utilities in the park.

\$2,000,000 is allocated for the renovation of office space in the Administration Building to accommodate additional staff, provide larger meeting areas, and to provide full compliance with American with Disabilities Act (ADA) standards.

\$500,000 is allocated to transform the existing Sea Lion exhibit into housing and indoor exhibit space for Tapir and Capybara.

\$100,000 is allocated to the development of a Chilean Flamingo exhibit.

\$1,100,000 is for the Belle Isle Zoo, plans, which are currently under development.

\$1,550,000 will provide funds for infrastructure repairs at the Belle Isle Aquarium; copper roof replacement of 96-year-old sewer/pipes and installation



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of a new public floor, soundproofing system, and rewiring of electrical system. In addition, installation of a child-viewing ramp around the entire public floor will enhance the visiting experience of children.

\$500,000 will be used to renovate the Primate House. Renovation of the public area and animal diet preparation area are planned, as well as, enlargement of the gibbon/langur exhibit and renovation of the indoor exhibit, to include addition of a glass front and separate the air-handling system for the animal area (to reduce odor in the public area).

\$1,500,000 is allocated for landscaping irrigation and capital equipment purchases at the DZP and BIZ.

\$1,000,000 is allocated to replace the existing Commissary with a new state-of-the-art facility for animal food delivery, storage and preparation.

\$1,000,000 is allocated to renovate the existing Maintenance and Landscape buildings.

\$500,000 is allocated to renovate the Bear Den.

\$4,500,000 in concessions is planned to renovate current concession facilities.

\$1,000,000 is allocated to technology infrastructure. Installation of fiber optic cabling and hardware from the Administration Building to admissions will provide distance learning equipment to tie-in with our new portable technology center. The upgrade in our telephone system will replace current equipment to keep pace with our increasing communication needs. A wireless digital life-safety system (fire

alarm, panic buttons, environmental monitoring system) for the entire Institute and visitor information system-Phase II is an important component of the Institute's customer service and security preparedness goals.

\$2,300,000 is allocated to renovate the Penguinarium and its mechanical systems.

### **INTERDEPARTMENTAL CAPITAL RELATIONSHIPS**

The Detroit Building authority is responsible for project administration on various department projects.

### **GOALS FOR CAPITAL PROGRAM**

1. Wildlife Conservation and Animal Welfare – To maintain exhibit facilities in a safe and humane manner consistent with standards of the U.S. Department of Agriculture (USDA) and the American Zoo and Aquarium Association (AZA).
2. Outstanding and Unique Educational Opportunities – To maintain the visitor and exhibit facilities to maximize the educational and recreational value of a zoo visit and to establish our reputation as a safe, user-friendly tourist destination.
3. Memorable experiences – To provide new and exciting exhibits to encourage new and repeat attendance, which will increase revenues and community support.
4. Facilities that contribute to the region's economic vitality – To provide a zoological resource worthy of a world-class city which will add to the cultural climate of the region and enhance the city as a place to live, work and visit.

## DETROIT ZOOLOGICAL INSTITUTE

5. Organization excellence consistent with outstanding service and progressive resource management – To increase our facility usage and efficiency by using methods of recycling water and air and installing more efficient heating systems. The Detroit Zoo also uses “green building” in its structures, in our efforts to use minimal natural resources and use recyclable materials wherever possible.

recreational and educational facility, new exhibits must be added to attract visitors and increase repeat visitations. Also, of paramount importance to the Zoo’s educational goals is the provision of an indoor facility suitable for conducting educational programs.

### **RATIONALE FOR CAPITAL PROGRAM**

The Zoological Park was constructed in the late 1920’s and early 1930’s. The Gunite structures, the buildings and utilities must be continually evaluated and properly maintained or replaced. New animal display techniques require constant review. Those exhibits where constraints on the animal collection exceed what is considered to be humane, have been closed or replaced. The United States Department of Agriculture (USDA), responsible for enforcing the provisions of the Animal Welfare Act, regularly inspects zoo exhibits and issues citations for improper housing and care. If corrections are not made within a designed time frame, the USDA has the power to close the Zoo.

The American Zoo and Aquarium Association, which establishes standards for zoo/aquarium management, evaluates member institutions every five years for accreditation. The adequacy of the physical facilities is an important component of this evaluation. Lack of accreditation would seriously impede our ability to acquire animals from other accredited zoological facilities and would restrict our ability to obtain federal permits for endangered species. To fulfill the mission of a zoo as a public

## DETROIT ZOOLOGICAL INSTITUTE

### **Arctic Ring of Life (ARL)**

This 4.2 acre new exhibit, which is slated for completion in the fall of 2000, will be the country's largest polar habitat. Its distinct polar environment will house polar bears, snowy owls and arctic foxes.

FY 00-01 Budget - \$4,800,000 Private Funds

### **Ford Center for Environmental Conservation**

The Ford Center for Environmental Conservation will host a variety of education opportunities for the casual visitor, as well as, students of all grade levels. Furthermore, through the use of distance learning The DZI will be able to go well beyond its physical borders to a worldwide audience.

FY2000-01 Budget - \$2,000,000 Private Funds

|         |             |               |
|---------|-------------|---------------|
| 2001-02 | \$2,100,000 | State Funds   |
|         | \$3,000,000 | Private Funds |

### **Veterinary Hospital**

DZI will open this facility in an effort to provide state-of-the-art animal medical and surgical care. Expansion is needed to provide suitable facilities for animal food preparation and on-site nutritional staff.

|         |             |                          |
|---------|-------------|--------------------------|
| 2001-02 | \$ 500,000  | General Obligation Bond  |
|         | \$ 800,000  | State Funds              |
|         | \$2,000,000 | Private Funds (increase) |
| 2002-03 | \$ 500,000  | State Funds              |

### **Great Ape Dayroom**

Renovation of this exhibit will replace the old wooden climbing structures with artificial trees and vines and will add sleeping platforms.

FY2000-01 Budget -\$100,000 Private Funding

### **Restrooms**

Remodeling and renovation is required to meet ADA requirements in the restrooms at the park. Upgrades of the restroom facilities include the Picnic Grove, Pavilion and Africa locations.

FY00-01 Budget - \$500,000 General Obligation Bonds, \$750,000 State Funds, \$750,000 Capital Reinvestment

|         |            |                         |
|---------|------------|-------------------------|
| 2001-02 | \$ 500,000 | General Obligation Bond |
|         | \$ 500,000 | State Funds             |
| 2002-03 | \$ 600,000 | General Obligation Bond |

## DETROIT ZOOLOGICAL INSTITUTE

### **Chimp Moat**

The water moat on the South side of the Chimp Exhibit will be renovated into a dry moat. This will improve the appearance of the south exhibit yard and provide a safe environment for the animals.

FY00-01 Budget - \$500,000 State Funds

|         |            |                         |
|---------|------------|-------------------------|
| 2001-02 | \$ 400,000 | General Obligation Bond |
| 2002-03 | \$ 400,000 | General Obligation Bond |

### **Gunitite**

Gunitite maintenance is an ongoing USDA requirement, which is used to repair cracks, broken masonry or moat exhibit surfaces as necessary. Most of the Institute's exhibits contain this substance.

FY00-01 Budget -\$500,000 Capital Reinvestment

|         |            |                         |
|---------|------------|-------------------------|
| 2002-03 | \$ 500,000 | General Obligation Bond |
| 2003-04 | \$ 500,000 | General Obligation Bond |

### **Roof Replacement**

This maintenance project will replace flat rooftops that have been repaired numerous times in the last 25 years.

|         |            |                         |
|---------|------------|-------------------------|
| 2003-04 | \$ 500,000 | General Obligation Bond |
| 2004-05 | \$ 500,000 | General Obligation Bond |

### **Paving/Road/Utilities**

Repaving of the main surface parking lot and the repair of pedestrian walkways in the park are ongoing projects.

FY00-01 Budget - \$600,000 State Funds

|         |             |              |
|---------|-------------|--------------|
| 2002-03 | \$1,000,000 | State Funds  |
|         | \$ 500,000  | Unprogrammed |

### **Administration/Hospital**

Renovations to office space will accommodate additional staff, provide larger meeting areas, and provide full compliance with ADA standards.

FY00-01 Budget - \$1,000,000 State Funds

|         |             |             |
|---------|-------------|-------------|
| 2001-02 | \$1,000,000 | State Funds |
|---------|-------------|-------------|

## DETROIT ZOOLOGICAL INSTITUTE

### **Sea/Lions**

Renovations to transform the existing Sea Lion exhibit into housing and indoor exhibit space for Tapir and Capybara.

FY00-01-Budget \$500,000 State Funds

### **Chilean Flamingo**

This project involves dividing the Pampas Yard to allow additional pool space, fencing to divide the year, and landscaping.

FY 2000-01-Budget \$100,000 Private Funds

### **Primate Housing Renovation**

Renovation of the public area and animal diet area are planned, enlargement and renovation, as well as the installation of air-handling systems.

|         |            |               |
|---------|------------|---------------|
| 2002-03 | \$ 500,000 | Private Funds |
|---------|------------|---------------|

### **Landscaping**

Various irrigation projects at the Detroit Zoo and the Belle Isle zoo and purchases of capital equipment.

|         |            |                         |
|---------|------------|-------------------------|
| 2003-04 | \$ 500,000 | Private Funds           |
| 2005-06 | \$ 500,000 | General Obligation Bond |
|         | \$ 500,000 | Unprogrammed            |

### **Commissary**

This project will replace the existing commissary with a new, state-of-the-art facility for animal food delivery, storage and preparation.

|         |            |                         |
|---------|------------|-------------------------|
| 2005-06 | \$ 500,000 | General Obligation Bond |
|         | \$ 500,000 | Unprogrammed            |

### **Maintenance/Landscape Buildings**

Funds will be spent on boiler replacement and central AC units in several buildings. Hydraulic life for vehicles, engines, transmissions, cross ties and rails for railroad locomotives. Resurfacing of Rackham Fountain. Replace current compressor used to winterize water lines.

|         |             |              |
|---------|-------------|--------------|
| 2005-06 | \$1,000,000 | Unprogrammed |
|---------|-------------|--------------|

### **Bear Den**

Renovation of the outdoor bear exhibits is planned, including addition of natural substrates, live trees and shrubs. Modifications will also be made to the existing polar bear pool for the Grizzly Bears. Modest improvements will improve the holding areas inside the building.

FY 2000-01-Budget \$500,000 State Funding

## DETROIT ZOOLOGICAL INSTITUTE

### **Concessions**

Renovation, remodeling, replacements and additions to current facilities

|         |             |                         |
|---------|-------------|-------------------------|
| 2004-05 | \$1,000,000 | General Obligation Bond |
| 2005-06 | \$1,000,000 | General Obligation Bond |
|         | \$2,500,000 | Unprogrammed            |

### **Facility Upgrade**

Fiber optic cabling and hardware from Administration Building to Admissions, and distance learning equipment from Administration will tie-in with portable technology center. Upgrade of telephone system will replace current telephone system and equipment. Wireless digital life-safety system (fire alarm, panic buttons, environmental monitory system) for the entire Institute, and a visitor information system will provide increased customer service and security preparedness.

FY2000-01-Budget \$250,000 State Funding

|         |             |              |
|---------|-------------|--------------|
| 2001-02 | \$1,000,000 | State Funds  |
|         | \$ 750,000  | Unprogrammed |

### **Penguinarium Renovation/Mechanical System**

This project involves upgrading animal life support equipment in this facility. Replacement equipment includes exhibit air handling, air filtration, water filtration, water-cooling, air conditioning and heat systems. The fiscal year 2000-01 budget includes \$500,000 in State funds for this project.

\$2,300,000 Unprogrammed

### **Belle Isle Zoo**

The Belle Isle Zoo roof and entranceway are being completely replaced. The old bear exhibit is being transformed into a new Red Panda exhibit. Sub-heating and lighting installation will provide more energy efficiency at all outdoor hold facilities.

FY 2000-01-Budget \$600,000- General Obligation Bonds

|         |           |                         |
|---------|-----------|-------------------------|
| 2003-04 | \$500,000 | General Obligation Bond |
|---------|-----------|-------------------------|

### **Belle Isle Aquarium**

Repair and replacement of areas of cooper roof, replacement of all sewer and drainage pipe serving the facility. Replacement of tile on public viewing floor and installation of child-height viewing ramp. Soundproofing, window replacement, and rewiring of electrical system.

FY 2000-01-Budget \$600,000- General Obligation Bonds

|         |           |                         |
|---------|-----------|-------------------------|
| 2003-04 | \$500,000 | General Obligation Bond |
| 2004-05 | \$450,000 | General Obligation Bond |

# ZOOLOGICAL INSTITUTE

(000's OMITTED)

|  | *              | **               | ***              |                      |                     |                   | ***** 5 Year Capital Plan ***** |         |         |         |         |              |
|--|----------------|------------------|------------------|----------------------|---------------------|-------------------|---------------------------------|---------|---------|---------|---------|--------------|
| Projects                                   | Project Status | Project Timeline | Impact on Budget | Funding Source       | Authorized Unissued | (Budget) 2000-01  | 2001-02                         | 2002-03 | 2003-04 | 2004-05 | 2005-06 | Unprogrammed |
| DETROIT ZOO                                |                |                  |                  |                      |                     |                   |                                 |         |         |         |         |              |
| Arctic Ring of Life                        | N              | O                | AS               | P.F.                 |                     | \$4,800           |                                 |         |         |         |         |              |
| Ford Center for Environmental Conservation | N              | P                | AF/AS            | O.S.<br>P.F.         |                     | 2,000             | \$2,100<br>3,000                |         |         |         |         |              |
| Veterinary Hospital Facility               | N              | P                | AF/AS            | G.O.<br>O.S.<br>P.F. | \$500               |                   | 500<br>800<br>2,000             | 500     |         |         |         |              |
| Great Ape Dayroom                          | M              | O                | RF               | P.F.                 |                     | 100               |                                 |         |         |         |         |              |
| Restrooms                                  | N              | P                | AF               | G.O.<br>O.S.<br>C.R. | 600                 | 500<br>250<br>300 | 500<br>500                      | \$600   |         |         |         |              |
| Chimp Mote                                 | M              | O                | NOI              | G.O.<br>O.S.         | 800                 | 500               | 400                             | 400     |         |         |         |              |
| Gunite Repair                              | M              | O                | NOI/NSI          | G.O.<br>C.R.         | 500                 | 500               |                                 | 500     | \$500   |         |         |              |
| Roof Replacement                           | M              | O                | NOI              | G.O.                 | 500                 |                   |                                 |         | 500     | 500     |         |              |
| PavingLots/Roads                           | M              | U                | NOI/NSI          | G.O.<br>O.S.         | 500                 | 100               |                                 | 1,000   |         |         |         | 500          |
| Administration/Hospital                    | N              | P                | AF               | G.O.<br>O.S.         | 500                 | 1,000             | 1,000                           |         |         |         |         | 1,000        |
| Sub-Total (page 1):                        |                |                  |                  |                      | \$3,900             | \$10,050          | \$10,800                        | \$3,000 | \$1,000 | \$500   | \$0     | \$1,500      |
| Funding Source Summary (page 1):           |                |                  |                  |                      |                     |                   |                                 |         |         |         |         |              |
| General Obligation Bonds                   |                |                  |                  | G.O.                 | \$3,900             | \$500             | \$1,400                         | \$1,500 | \$1,000 | \$500   | \$0     | \$1,500      |
| Other Identified Source #                  |                |                  |                  | O.S.                 | \$0                 | \$1,850           | \$4,400                         | \$1,500 | \$0     | \$0     | \$0     | \$0          |
| Private Funding                            |                |                  |                  | P.F.                 |                     | \$6,900           | \$5,000                         | \$0     | \$0     | \$0     | \$0     | \$0          |
| Capital Reinvestment                       |                |                  |                  | C.R.                 |                     | \$800             |                                 |         |         |         |         |              |

# Includes State Grants

\* PROJECT STATUS: M=project is maintaining current infrastructure; N=Project will result in new development

\*\* PROJECT TIMELINE: P=project is proposed; O=project is ongoing; U=project is one time and underway

\*\*\* IMPACT ON OPERATING BUDGET: AF=additional funding required; RF=results in reduction of funding; NOI=no operating impact

\*\*\* IMPACT ON STAFFING BUDGET: AS=additional staffing required; RS=results in reduction of staffing; NSI=no staffing impact

# ZOOLOGICAL INSTITUTE

(000's OMITTED)

| Projects                                      | *<br>Project<br>Status | **<br>Project<br>Timeline | ***<br>Impact<br>on Budget | Funding<br>Source | Authorized<br>Unissued | (Budget)<br>2000-01 | ***** 5 Year Capital Plan ***** |         |         |         |         | Unprogrammed |
|---|------------------------|---------------------------|----------------------------|-------------------|------------------------|---------------------|---------------------------------|---------|---------|---------|---------|--------------|
|   |                        |                           |                            |                   |                        |                     | 2001-02                         | 2002-03 | 2003-04 | 2004-05 | 2005-06 |              |
| Sea Liions Exhibit                            | M                      | O                         | RF                         | O.S.              |                        | \$500               |                                 |         |         |         |         |              |
| Chilean Flamingo                              | M                      | U                         | RF                         | P.F.              |                        | 100                 |                                 |         |         |         |         |              |
| Primate House Renovations                     | M                      | O                         | NOI                        | P.F.              |                        |                     |                                 | \$500   |         |         |         |              |
| Landscaping                                   | N                      | P                         | NOI/NSI                    | G.O.<br>P.F.      | \$500                  |                     |                                 |         | 500     |         | 500     | 500          |
| Commissary                                    | N                      | P                         | NOI/NSI                    | G.O.              | 500                    |                     |                                 |         |         |         | 500     | 500          |
| Maintenance/Landscaping Buildings             | M                      | O                         | NOI/NSI                    | G.O.              | 1,000                  |                     |                                 |         |         |         |         | \$1,000      |
| Bear Den                                      | M                      | O                         | NOI/NSI                    | O.S.              |                        | 500                 |                                 |         |         |         |         |              |
| Concessions                                   | M                      | P                         | AF/AS                      | G.O.              | 2,000                  |                     |                                 |         |         | 1,000   | 1,000   | 2,500        |
| Technology Infrastructure                     | M                      | O                         | AF/AS                      | G.O.<br>O.S.      | 750                    | 250                 | \$1,000                         |         |         |         |         | 750          |
| Penguinarium Renovation/<br>Mechanical System | M                      | O                         | AF/NSI                     | G.O.              | 1,000                  |                     |                                 |         |         |         |         | 2,300        |
| <b>BELLE ISLE</b>                             |                        |                           |                            |                   |                        |                     |                                 |         |         |         |         |              |
| Roof and Entrance Way                         | M                      | P                         | NOI/NSI                    | G.O.              |                        | 600                 |                                 |         | 500     |         |         |              |
| Aquarium Renovations                          | M                      | U                         | NOI/NSI                    | G.O.              | 350                    | 600                 |                                 |         | 500     | 450     |         |              |
| Sub-Total (page 2):                           |                        |                           |                            |                   | \$6,100                | \$2,550             | \$1,000                         | \$500   | \$1,500 | \$1,450 | \$2,000 | \$7,550      |

## Funding Source Summary (page2):

|                           |      |         |         |         |       |         |         |         |         |
|---------------------------|------|---------|---------|---------|-------|---------|---------|---------|---------|
| General Obligation Bonds  | G.O. | \$6,100 | \$1,200 | \$0     | \$0   | \$1,000 | \$1,450 | \$2,000 | \$7,550 |
| Other Identified Source # | O.S. |         | \$1,250 | \$1,000 | \$0   | \$0     | \$0     | \$0     | \$0     |
|                           | P.F. |         | \$100   | \$0     | \$500 | \$500   | \$0     | \$0     | \$0     |

# Includes State Grants

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# ZOOLOGICAL INSTITUTE

(000's OMITTED)

| Projects                       | *              | **               | ***              | Funding Source | Authorized Unissued | (Budget) 2000-01 | ***** 5 Year Capital Plan ***** |         |         |         |         | Unprogrammed |
|--------------------------------|----------------|------------------|------------------|----------------|---------------------|------------------|---------------------------------|---------|---------|---------|---------|--------------|
|                                | Project Status | Project Timeline | Impact on Budget |                |                     |                  | 2001-02                         | 2002-03 | 2003-04 | 2004-05 | 2005-06 |              |
| GRAND TOTALS                   |                |                  |                  |                | \$10,000            | \$12,600         | \$11,800                        | \$3,500 | \$2,500 | \$1,950 | \$2,000 | \$9,050      |
| Funding Source Summary Totals: |                |                  |                  |                |                     |                  |                                 |         |         |         |         |              |
| General Obligation Bonds       |                |                  |                  | G.O.           | \$10,000            | \$1,700          | \$1,400                         | \$1,500 | \$2,000 | \$1,950 | \$2,000 | \$9,050      |
| Other Identified Source #      |                |                  |                  | O.S.           |                     | \$3,100          | \$5,400                         | \$1,500 | \$0     | \$0     | \$0     | \$0          |
| Private Funding                |                |                  |                  | P.F.           |                     | \$7,000          | \$5,000                         | \$500   | \$500   | \$0     | \$0     | \$0          |
| Capital Reinvestment           |                |                  |                  | C.R.           |                     | \$800            |                                 |         |         |         |         |              |

# Includes State Grants

\* PROJECT STATUS: M=project is maintaining current infrastructure; N=Project will result in new development

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